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DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
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JOURNAL STAFF

Editorial: Ginger Hale
Betsy Matheson
Marc Wilhelm

Production & Distribution: Charles Owens
Ruth Perry

Copy Processing:
Gail Buckner
Melba Wooten

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INTRODUCTION

THE INSTITUTE FOR MEDICAID MANAGEMENT

The Institute for Medicaid Management (IMM) was established to provide training and technical assistance to States, to facilitate the exchange of pertinent ideas in the Medicaid program and to point out effective practices of the States. IMM's goal is to bring about improved management of the Medicaid program so that medical care for the poor and medically needy can be provided in an affordable and effective way.

To achieve this goal, IMM plans to use a multi-faceted approach:

to lead conferences and workshops covering subjects useful to the States;

to issue publications covering exemplary State practices, conference proceedings, current approaches to specific problems and other stimulating ideas on health programs in general;

to provide on-site technical assistance to States and to coordinate technical assistance efforts of the Medicaid Bureau; and

to evalute State training needs, to develop curriculum based on this evaluation and to provide training material for State staff utilizing the curriculum.

This publication serves as a vehicle for dissemination of various State solutions to problems, innovative ideas and articles of general and special interest to State Medicaid Managers and staff.

We welcome articles on any subject related to the Medicaid program. We are particularly interested in receiving articles from State agency representatives. Responses to previously published material are also welcome.

We see this publication as a joint Federal/State effort. If it is to be successful, we must have contributions from the States as well as your views on how well we are meeting your needs.

Please forward all communications, contributions, requests for information and materials to:

Lawrence Levinson, Acting Director
The Institute for Medicaid Management
Medicaid Bureau, HCFA, HEW
Room 4030, Mary E. Switzer Building
330 "C" Street, S.W.
Washington, D.C. 20201

NURSING HOME PREADMISSION SCREENING IN VIRGINIA

By CHARLOTTE CARNES
and ANN COOK

Introduction

In discussing health care services for disabled and elderly persons, three concerns are paramount. They are: (1) the increasing number of elderly persons; (2) the high cost of health care, particularly in long term care facilities; and (3) the increasing number of admissions to long term care facilities. In 1965 there were 18.5 million people 65 years or older in the United States; by 1975 there were 22.4 million elderly. This country spent $139.3 billion for health care in FY1976—14 percent more than in the previous year, with expenditures for nursing home care increasing from $3.8 billion in 1970 (or 6 percent of total health care expenditures) to $10.6 billion in 1976 (or 8 percent of all health care expenditures.) Medicaid's share of this nursing home cost was $1.6 billion in FY 1970 and $5.4 billion in FY 1976. An additional measure is the growth of the nursing home industry itself. There were 3-1/2 times as many beds in nursing homes in 1973 as a decade earlier (1.1 million in 1973 compared with 0.3 million in 1963.)[1]

One means used to meet the health needs of the disabled and elderly has been the construction of additional long term care facilities. In addition, government programs such as Medicare and Medicaid have been implemented to cover nursing home care. With these measures has come increased placement of the disabled and elderly in long term care facilities. Today, after more than a decade of Medicare and Medicaid, a question still seeking an answer persists. Did the funding available through these programs create the need for long term care, or did these programs in fact fulfill long unmet health needs? Such philosophizing, no matter how intriguing, does not alter the fact of these health care programs or that they must be run as efficiently and effectively as possible.

In attempting to meet the health care needs of the disabled and elderly through institutional placement, the patients themselves often have not been apprised of alternatives to nursing home placement, or given opportunity to make decisions as to placement—decisions impacting on their own lives. Increased perception of this deficiency by both individuals and program managers has resulted in emphasis on the needs and rights of disabled and elderly persons.

Even the most benevolent and compassionate institution cannot provide the sense of self-determination and independence that an individual can experience in his or her own home. Being placed in a nursing home often means parting with individual freedom and treasured material possessions. It means accommodating one's lifestyle to the demands of efficient facility management and group dynamics, and severing ties with family, friends, and community.

In short, providing care to the disabled and elderly has become costly in terms of health dollars, and complex in terms of protecting the rights of individuals to live as normal and satisfying a life for as long as possible. Historically, our society's attempts at dealing with the needs of the disabled and elderly have created the dichotomy of meeting the individual's physical health needs at the expense of his or her mental well-being. In response to this dichotomy, the Virginia Medical Assistance Program (VMAP) has developed and implemented a Nursing Home Pre-Admission Screening Program. The remainder of this discussion will be focused on this program's background, conception, policy, procedure and current results.

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[1] Health, United States, 1976-1977, DHEW Publication No. (HRA) 77-1223; Health, United States, 1976-1977 Chartbook, DHEW Publication No. (HRA) 77-1233; Data on the Medicaid Program, Eligibility/Services/Expenditures, FY 1966-77.

Background and Conception

In 1972, when Medicaid coverage of intermediate care facilities (ICFs) as an optional service began, the VMAP included this service as part of its Title XIX program, augmenting mandated skilled nursing facility (SNF) services. Early in 1975, after three years of rising ICF costs, the VMAP began focusing on handling the increasing number of patients going into nursing homes. In 1972, the average cost per day for ICF care was $15; by 1975, it had risen to $19.37 a day. The cost of intermediate nursing home care had overtaken and passed inpatient hospitalization to become the most expensive item in Virginia's Medicaid budget. In the past two and one-half years, the VMAP has experienced a net increase of 32% in claims for nursing home care. Payments to intermediate care facilities for FY 1976 accounted for 38% of the Title XIX budget in Virginia, or approximately $71 million. In FY 1977, Virginia spent $102 million or 42% of its $245 million Medicaid budget on ICFs.[2]

Additionally, since Medicaid in Virginia covers both the categorically and medically needy, every elderly and disabled Virginian is potentially eligible for Medicaid. Demographic studies reveal that the aging population of Virginia has grown from 10.7 percent of the total State population in 1960, to 12.5 percent in 1976, with a projection of 13 percent in 1980. In all, some 621,683 persons 60 years of age and older currently reside in the State.[3] Some 53,301 of them are eligible for Medicaid in the "aged" category, and 34,385 are eligible as disabled individuals.

In 1972, 7,083 of the 9,963 nursing home beds licensed in Virginia were certified for intermediate care. In October 1977, some 13,837 of the 14,702 licensed beds in Virginia were certified for intermediate care. Medicaid enrolled persons occupied 63-1/2 percent of those ICF beds. In its SNF program, Virginia has always used Medicare criteria to determine SNF coverage. Thus, our SNF population represents the more intensive care patient, with the broader definition of Medicaid ICF services directly reflected in the number of beds and patients in the intermediate care spectrum.

Projected expenditures for skilled and intermediate care in the 1978-1980 biennium are in excess of $200 million for community nursing homes, with an additional $75 million projected for long term care beds in State institutions for the mentally ill or retarded.

Clearly, fiscal reality and planning demanded that increasing patient admissions from the community directly into long term care facilities be controlled. A consideration of equal importance was the human services issue of appropriateness of care for the institutionalized. Believing that cost containment and quality of care can work together, State Medicaid staff decided to find an answer to these problems—an answer that was compatible with both human needs and fiscal control. We began by considering the Medicaid program's role in contributing to nursing home placements. Funding for placement of the elderly and disabled was readily available for those who were Medicaid eligible, while community based services, such as home health services, were underutilized, and services under Title XX were both underfunded and underutilized. The existence of a medically needy program practically assured Medicaid eligibility for a majority of long term care patients.

In analyzing the issues of readily available funding for nursing home placement and the accompanying underutilization of community based services, several problems were considered. These included: the pressures placed on hospital discharge planners and local departments of welfare by a combination of families, physicians and government requirements to find readily available, funded services for elderly and disabled persons who could not continue to live independently; and the fact that elderly and disabled persons and their families were often unaware of community based services. In addition, the fragmentation of community based services which contributes to the lack of awareness about available services, and the difficulties of threading through the maze of community services were considered. Analysis of these problems led State Medicaid staff to a possible solution: Could a local interdisciplinary team review the appropriateness of nursing home placement prior to admission and thereby enhance the use of community based services for elderly and disabled persons? Such a team should be knowledgeable about local resources that could be mobilized to meet the needs of the individuals screened.

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[2] Data on the Medicaid Program; Eligibility/Services/Expenditures, Fiscal Years 1966-78, published by the Institute for Medicaid Management.

[3] *Alternatives to Institutionalization*, a paper by Edwin L. Wood, Director, Virginia Office on Aging, presented to the Commission on Needs of Elderly Virginians in December 1976.

Virginia's Medicaid program is administered by the Department of Health. In July 1976, the Department of Health, working through four local health districts, began to test a nursing home pre-admission screening program. This pilot project was conducted over 9 months in both urban and rural areas. Screening committees composed of a local health department physician, a public health nurse and an adult services social worker were established.

Virginia's relationship with its nursing home providers is built on trust and cooperation. The open dialogue between them has contributed to the success of the screening program. Every Medicaid nursing home in the State was advised in writing that patients in these four localities who were living at home and sought admission would have to be screened by the local committee before actual admission to the facility. Screening was necessary if the patients were Medicaid eligible, or would become Medicaid eligible within 90 days subsequent to admission. This screening requirement became part of the State's admission certification and Medicaid payment would not be made without the screening committee's approval.

A Nursing Home Screening Certificate was developed for use in the program. The form was completed on each individual screened, and although simple in format, included medical, nursing and social information sufficient to create a picture of the "total" person. (See Figure 1.)

The local screening committees were advised to: (1) evaluate the medical, nursing and social needs of each individual referred for pre-admission screening; (2) analyze what specific services the individual needed; and (3) evaluate whether a service or a combination of existing community services were available to meet the individual's need. The committee's assessment of services availability would depend upon whether the needed services existed in the patient's community, the individual's financial eligibility for the service, and whether the service could be delivered at the time and in the amount necessary to meet the individual's need.

Services which could possibly be used to help an individual remain in the community were home health services, chore and companion services, congregate or home delivered meals, adult day care, homemaker services, protective service for adults, and sheltered living arrangements, such as homes for adults or foster homes. If the committee determined that any of these services were needed, the individual was informed by letter and referred to the appropriate provider; the committee followed up to see that the services were provided and the individual was being successfully cared for in the community.

The pilot project showed that 26.3 percent of the 167 individuals screened could be successfully cared for in the community through the use of alternative methods of care. Based on the success of the pilot project, the Virginia Medical Assistance Program initiated pre-admission screening Statewide. The program has received the enthusiastic support of the Virginia Secretary of Human Resources, the Virginia Office on Aging, the State Department of Welfare, the Virginia Health Care Association (the State nursing home association) and the Virginia Commission on the Needs of Elderly Virginians, thereby increasing its acceptance.

Statewide Initiation

Effective May 15, 1977, initiation of the nursing home pre-admission screening program began on a Statewide basis. Orientation sessions for the local health and welfare departments were held throughout the State. At these sessions, background, suggested methodology and philosophy of the program were covered.

As in the pilot project, persons screened are those who are neither in a community hospital nor another nursing home at the time of application. Screening occurs if the individual is, or will become, Medicaid eligible within 90 days of nursing home admission.

Applicants are assessed by the screening committee of the local health department where they live. The committee continues to be composed of a physician, a nurse, and a social

Figure 1

VIRGINIA

NURSING HOME SCREENING CERTIFICATE

HEALTH DISTRICT____________________ HEALTH DEPARTMENT______________________________

Name of Patient____ Age: MF MSDW
Last First Middle

Address____

Source of Referral: Self____ Family____ Friend____ Welfare Dept.____ Other (Identify)________

RECOMMENDATION:	COMMENTS:
Nursing Home ____	____
No Change ____	____
Other Living Arrangements	____
	____
Home for Adults ____	____
With Relatives ____	____
Other (Describe) ____	____

SERVICES REQUIRED/AVAILABLE:	SERVICES REQUIRED/NOT AVAILABLE:
1. Meals (Congregate, etc.) ____	1. Meals (Congregate, etc.) ____
2. Chore Services ____	2. Chore Services ____
3. Companion Services ____	3. Companion Services ____
4. Home Health ____	4. Home Health ____
5. Homemaker ____	5. Homemaker ____
6. Day Care ____	6. Day Care ____
7. Other (Define) ____	7. Other (Define) ____

COMMENTS:____

____

____

____

__________________ Date	______________________________ Signature
__________________ Man-hours, total	______________________________ Title

Figure 1

PRIMARY DIAGNOSIS:

Hypertension ____
Diabetes ____
Heart ____
Other Cardiovascular Diseases, including CVA ____
Cancer ____
Arthritis ____
Other (Define) ____

COMMENTS:

FUNCTIONAL CAPACITY:

Completely bedridden ____
Up in chair only ____
Ambulates with help (Device) ____
Ambulates with help (Other person) ____
Independent Ambulation ____

SPECIAL DISABILITIES:

Paralysis/Paresis ____
Ambulation ____
Contractures/ Deformities ____
Impaired Vision ____
Deafness ____
Confused/Aberrant Behavior ____
Other ____

PRESENTING PROBLEMS:

Unable to Cope with Activities of Daily Living
  Personal Care ____
  Care of the Home ____
  Food Preparation (Including Purchase) ____
Menace to Self and Others ____

COMMENTS:

CURRENT LIVING ARRANGEMENT:

House/Apartment
  Alone ____
  With Spouse ____
  With Child ____
  With Other Relative ____
  With Friend ____

Home for Adults ____
Rooming House ____
Room and Board ____
Other Institution (identify) ____

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worker from local health or welfare departments. Usually the social worker is employed by the welfare department; occasionally, a local health department social worker will also participate in screening. In addition, the committees have been encouraged to work with other community agencies offering services to the elderly and disabled. In some areas, other agencies which participate on the committee include an area office on aging, a mental health clinic, a private home health agency, a ministerial association, nursing homes, and homes for adults. In one locality, a representative from the community hospital also participates.

Upon receiving a screening referral, usually from the welfare department or family, the committee's social worker and public health department nurse interview the individual and complete the Nursing Home Screening Certificate. The social worker prepares a social evaluation of the individual and the health department nurse evaluates the person's nursing needs, and obtains the medical history. The full committee meets and the evaluations are presented and discussed. If it is not possible for the committee physician to visit the patient and additional medical information is needed, his or her private physician is contacted. The committee carefully reviews each person's case to determine if nursing home admission is appropriate or if he or she can be cared for adequately at home or in the community through local services.

When the committee has reached a decision, the referring agency or individual is informed by letter, with a copy to the local welfare department and to the nursing home, if placement is approved.

Referral and follow up are vital parts of the program. Virginia stresses the human aspect from the initial personal contact with the individual by the nurse or social worker, through referral and follow up. Depending on the type of services needed, either the social worker or nurse will make the referral to the appropriate agency and assure that the individual and family understand how to receive services. In some instances, the nurse or social worker will make a phone call or visit the individual after that to determine if his or her needs are being adequately met. From time to time, the screening committee will discuss individuals previously screened, to evaluate their progress, and are brought up to date on these individuals' status. In the next year, Virginia hopes to formalize these procedures, as well as increase public relations efforts concerning the program, and availability of non-institutional services.

When the Virginia pre-admission screening program began Statewide, prospective nursing home candidates from facilities of the Department of Mental Health and Mental Retardation were included in the program. These evaluations were conducted by the Utilization Review Section (UR Section) of the VMAP, which substitutes for the local screening committees. In this case the referring facility, a State hospital, prepares medical, nursing, and social information on the potential nursing home candidate for the UR Section. Often the referring hospital indicates a particular nursing home which could meet the individual's physical and mental needs. The UR Section may contact the referring agency if sufficient data on the individual is not supplied. The referring agency or individual is advised in writing of the committee's decision to either authorize or deny payment for nursing home care. If payment is authorized, the appropriate facility is also notified. Transfer from a State hospital to a nursing home is generally on a furlough basis to assure that patients can easily return to proper settings if the nursing home does not meet their particular needs. Appropriate placement of these individuals is, of course, insured by individual professional review teams' regular review of Medicaid nursing home patient care. Without prior UR Section authorization, the VMAP does not make a nursing home payment.

Reporting Mechanism and Program Results

During the first ten months of this program, 1,755 individuals throughout the State have been assessed by screening committees; 395 have been found able to remain in the community (22.5 percent). In addition, 175 patients in State mental health and mental retardation facilities have been screened. Twenty-two percent of these patients were not approved for nursing home care. In these unapproved cases, the most appropriate placement for the individual was determined to be either continued hospitalization, or transfer to a licensed adult home or foster home.

To capture information on all individuals screened, and to identify which services were or were not available throughout the State, VMAP receives the Nursing Home Screening Certificate on each individual screened. Analysis to date reveals that the service most often "unavailable" to maintain individuals in the community is companion service (29 percent of the cases), followed by chore services in 22 percent of the cases, homemaker services in 21 percent of the cases, meals in 20 percent of the cases, and adult day care in 18 percent of the cases. Only home health services were available in all areas of the State in sufficient quantity to meet the need in most cases.

The data reflect several reasons that needed services are not available. One is that the individual cannot meet income eligibility requirements for specific services. This is particularly true for individuals with resources above the allowable amount for Supplemental Security Income (SSI). Their ineligibility for SSI renders them ineligible for chore and companion services under Title XX in Virginia.* In many other instances, the service "needed" does not exist in the community. The most striking example of this is adult day care. A third reason for "non-availability of services" is that they may not be offered in sufficient numbers of hours to meet the patient's need.

As a result of these preliminary findings, Virginia is already exploring ways to increase awareness of community based services, and is working towards increasing alternative means of caring for persons, with the goal of having a nursing home become only *one* option among many long term settings, rather than the *only* option in the minds of many.

Conclusion

At this time, definitive data on cost savings are not available. However, we can make a reasonable projection of estimated cost savings using figures from a recent GAO study[4] on home health care, and our best estimate of ICF costs in Virginia. Home health services, of course, do not include such services as chore, companion, homemaker and day care services. If the cost of intermediate care in Virginia averages about $24.83 a day, a monthly estimate of expenditures for this care would be $750 ($25 a day X 30 days a month.)

The GAO study estimates that there is a break-even point, depending on the person's level of impairment, after which home health care costs exceed institutional costs. The cost of providing care in the home at this level is approximately $400 a month. Therefore, if an individual could use home health services, instead of ICF services, possible savings of $350 per patient per month could be realized. If we apply this to the results of the first 10 months of the program, maintaining 395 individuals in the community would save the State $138,500 per month, or approximately $1.6 million a year. While these figures are by no means firm and represent only projections, they do indicate potential "savings" that could be realized from pre-admission screening programs such as Virginia's.

Benefits in terms of social values are more immediately visible, however. Wherever possible, disabled and elderly persons are not being uprooted from their homes and communities and placed in institutional settings. Inappropriate and often unwanted nursing home placements have been delayed or avoided through use of community resources. We have contributed to the well-being of our elderly and disabled recipients and will continue to help them maintain their sense of self-esteem. We believe this can be accomplished only if they remain part of, and feel they are contributing to the community, instead of being dependent upon it. The screening program thus supports directly our goal of assuring the dignity and rights of the elderly and disabled. The emphasis placed on the human factor and the need for support and communication with other agencies are keys to the program's success.

---

*This is a Federal problem - one involving legislative requirements that conflict and thus work against the very people the programs were intended to serve, since these eligibility requirements create barriers to non-institutional services.

[4] Comptroller General's Report to the Congress - Home Health - The Need for a National Policy to Better Provide for the Elderly (HRD-78-19, 12/30/77).

With this program Virginia is also beginning to systematically measure the types of services available in the State, and to identify services required in the community to meet the needs of its elderly and disabled citizens. Based on the need for such services, we are better prepared to actively work towards a Statewide system of community services. The program is important also as a management tool, because it illustrates to us that costs can be contained and the recipient still be well served. We have not yet begun to explore other uses of the data for program management purposes, but have no doubt such situations will arise.

- *Charlotte Carnes has been a social work consultant for the Virginia Department of Health's Nursing Home Pre-Admission Screening Program since August 1977. She has a degree from the University of North Carolina at Greensboro in sociology and social work, and an MSW from Virginia Commonwealth University. She worked as a social worker for the city of Richmond and as a Medicaid appeals hearing specialist for six years.*
- *Ann Cook is the Medical Social Service Director of the Virginia Medical Assistance Program. She received her MSW from the University of North Carolina at Chapel Hill and has been a medical social worker with the State Health Department since 1969.*

SECOND OPINION PROGRAMS: THEIR POTENTIAL FOR MEDICAID

by KARYN SHERIDAN

In the last decade, the nation's health care bill has risen from $42.1 billion (1966) to $162.6 billion (1977).[1] These spiralling costs are a matter of grave concern to governmental and nongovernmental health administrators, and to taxpayers. Controlling this escalation has become particularly crucial as the possibility of national health insurance draws near.

One of the current approaches toward paring health budgets is monitoring patients' surgical utilization. Known as a "second opinion" program, these procedures require all prospective surgical patients to obtain a second consultant's opinion on the need for surgery as the next most appropriate step in a course of medical treatment. There are several reasons for this focus on surgery. From 1971 to 1975, surgical rates have increased 23 percent,[2] and surgery accounts for approximately one-third of increasingly expensive costs for hospital and physician services.[3] The National Center for Health Statistics estimated that 21 million surgical operations were performed in 1976.[4]

Interest in controlling surgery has been focused primarily on non-emergency or "elective" surgical procedures: elective surgery represents approximately 40 percent of hospital admissions in patients under 65.[5] Elective surgery is also unusually susceptible to cost control, since it represents a distinct and unambiguous event administered by a central figure, i.e., the surgeon.[6] The potential impact of second opinion programs on Medicaid becomes apparent when costs for elective surgery under Medicaid are examined: about 6 percent of total Medicaid expenditures in 1976, or $800 million.[7] The HEW Inspector General's office recently estimated that $600 million could be saved in HCFA programs by proper surgical monitoring.[8]

Studies on "Unnecessary" Surgery

Physicians themselves documented the first incidences of inappropriate or unnecessary surgery. Their studies revealed widely divergent regional variations in surgical rates; unusually high rates of surgery in fee-for-services settings compared to prepaid health plans; the removal of significant amounts of healthy tissue during surgery; and a decrease in both costs and surgical rates in experimental second surgical opinion programs.

Regional Variations: Between 1969 and 1975, several researchers found an abnormal variation in rates of surgery in different parts of the United States. Dr. Charles E. Lewis of Harvard University divided the State of Kansas into eleven regions and monitored the surgical rate of six different operations performed in area hospitals. Appendectomies varied from 14.6 to 61.8 per 10,000 population, and tonsillectomies ranged from 153.4 to 432.6 per 10,000. After finding high correlation between surgical rates, numbers of surgeons and hospital beds, Lewis concluded that surgical admissions expanded "to fill beds, operating units, and surgeons' time."[9]

Similar studies of surgery occurred in two other States, Vermont and Maine. Dr. John Wennberg, of the Harvard Center for Community Health and Medical Care, and Alan Gittelsohn, of The Johns Hopkins University School of Public Health and Hygiene, examined rates of nine surgical operations in both States. In Vermont, variations in surgery occurred as shown in Chart A.[10]

Variations in surgery rates in Maine were similarly divergent.[11] (Chart B.)

While warning that a high rate did not necessarily mean an unnecessary amount of surgery,

CHART A

Operation	Lowest Rates	Highest Rates
Tonsillectomy	13	151
Appendectomy	10	32
Hemorrhoidectomy	2	10
Prostatectomy	11	38
Cholecystectomy	17	57
Hysterectomy	20	60
Mastectomy	12	33
Dilatation & Curettage	30	141
Varicose Veins	6	28

Variations in Rates of Surgery
for Nine Commonly Performed Operations
Vermont, 1969

CHART B

Operation	Lowest Rates	Highest Rates
Tonsillectomy	23	122
Appendectomy	11	22
Hemorrhoidectomy	3	19
Prostatectomy	18	40
Cholecystectomy	27	55
Hysterectomy	39	43
Dilatation & Curettage	49	117
Varicose Veins	3	10
Inguinal Hernia	35	60

Rate of Surgery Per 10,000 Population
for Nine Common Procedures
Maine, 1973

Wennberg and Gittelsohn, like Lewis before them, discovered an unusually close association between surgical manpower and facilities, and a greater number of surgical operations.

Health Maintenance Organizations: In addition to the variations in surgery among regions, one study indicated that prepaid health plans may experience lower rates of surgical utilization than traditional fee-for-service arrangements. Clifton Gaus, Barbara Cooper, and Constance Hirshman of the Social Security Administration collected utilization data for approximately 8,000 Medicaid families in ten Health Maintenance Organizations (HMOs) and ten fee-for-service areas. Their results showed that hospitalization of HMO subscribers was one-third that of fee-for-service patients, with surgery performed 50 percent less often among HMO patients.[12] Two important implications of this study were that HMOs, as prepaid plans, had a fiscal stake in controlling hospital and surgical costs, while surgeons paid on a fee basis may hospitalize and operate more often than salaried HMO physicians in order to maintain a high income.

Retrospective Chart Reviews: The health community was first alerted to the possibility of inappropriate surgery through retrospective chart review. Several important studies of this type examined the performance of hysterectomies.

Dr. James C. Doyle, of the University of Southern California, analyzed 6,248 cases involving a hysterectomy in 35 California hospitals in 1948. He and his staff found that 39 percent of the procedures should not have been performed.[13]

Similar conclusions were made by Dr. Alan F. Guttmacher in 1962 when he discovered that 33 percent of the hysterectomies performed on a sample of women covered by a New York Teamsters health plan were unnecessary, and that 10 percent were questionable.[14] The third study on hysterectomies was conducted by Dr. Jacob Fine, of Harvard, and Dr. Mildred A. Morehead, of the Albert Einstein College of Medicine, in 1971. Based on a set of procedural questions developed by the New York State Medical Society, board-certified specialists found that 43 percent of 143 hysterectomies performed in six area hospitals were unwarranted.[15] While chart reviews provided the first pieces of evidence to support a charge of unnecessary or inappropriate surgery, a significant drawback to this research existed in the choice of the surgical procedure, hysterectomy, selected for study. At the time, the question was raised, and not answered, as to how much healthy tissues was removed for the patient's convenience or comfort. Problems with these studies still remain; however, suspicions of excess surgery were growing and were reinforced by additional surgical studies involving HMOs, regional rates, and second opinion programs.

Second Opinions—The Cornell Project

In 1972, union and management trustees of several New York City Taft-Hartley Welfare Funds and State and local government employee welfare funds requested assistance from the Cornell School of Industrial and Labor Relations to develop a program to combat "unnecessary" surgery. Dr. Eugene G. McCarthy, of the Cornell University Medical College, directed this effort to require pre-surgical screening by a second or third consultant, as an integral part of the union health programs. The focus of this new "second opinion program" was to assist the patient in deciding whether to undergo surgery; incidentally, it was hoped that second opinions would decrease rates of surgery and their attendant costs.

The program, begun in 1972, is still in operation. Administrative responsibility for the Cornell second opinion program rests in a referral center. Union members faced with a decision on surgery can contact their union referral center for the name of a board-certified surgical specialist. An "intake officer" at the center obtains personal and medical information from the patient, arranges a consultative appointment, and contacts both the primary physician and the consultants for laboratory test results and written diagnostic information.

Surgical consultants for the program are selected based on board-certification and affiliation with teaching and community hospitals in the New York area. Surgeon participation in the program is conditioned on his/her acceptance of certain ground rules, such as a $40.00 consultation fee as full payment and a promise that he/she will refrain from performing the surgical operation in question.

The original program, designed and implemented in 1972, included two unions covering approximately 220,000 persons. For one union, the patient's decision to seek a second opinion on surgery was voluntary; the second union, with a few exceptions, required its members to obtain a second opinion for surgery before payment would be authorized. The nature of these voluntary versus mandatory programs affected the final results of McCarthy's study.

In 1974, Eugene G. McCarthy and Geraldine Widmer published their first findings on the Cornell second opinion project in *The New England Journal of Medicine*. The number of unconfirmed surgical diagnoses was significant: 30.4 percent of recommended surgical procedures in the voluntary program and 17.6 percent in the mandatory program were not confirmed. Inappropriate surgical recommendations appeared most common in gynecologic, orthopedic, and urologic specialties.[16] Tentative cost-savings for the program were computed to be $8.00 saved for every $1.00 spent. However, furor over these cost figures developed because McCarthy had not considered an offset to reflect future surgery for initially unconfirmed patients.

Ongoing studies through October, 1977, of the Cornell project have confirmed McCarthy's original statistics. Unconfirmed surgery rates in the voluntary program reached 33.5 percent, while 17.2 percent of the recommendations in the mandatory groups were unconfirmed. Gynecology, orthopedics, and opthamology showed the highest non-confirmed rates. Follow-up of the original studies was also undertaken. Of those patients responding,* 79 percent in the voluntary program confirmed for elective surgery had not received an operation after one year, and 63.6 percent in the mandatory group had not had surgery. Of even more interest were those unconfirmed patients who subsequently had no additional medical treatment: 60.7 percent in the voluntary group and 58.8 percent in the mandatory group.[17] These patients represent the real possibility of surplus surgery. A cost-savings figure similar to the 8:1 ratio computed in 1974 is unavailable at this time.

National publicity describing the Cornell project as a way to cut surgical rates and costs in health programs led to other national second opinion programs, sponsored by a variety of public and private medical insurance groups. More than seventeen different programs are now in existence.[18]. This total includes only one HCFA approved Medicaid program, developed and administered by the State of Massachusetts.

The Massachusetts Medicaid Second Opinion Program

Several State Medicaid agencies have instituted second opinion efforts, but only one, Massachusetts, has an established program consistent with the concept of a *medical* service as outlined in Federal regulations.

In 1976, Massachusetts legislated a type of "mandatory" second opinion program for Title XIX patients seeking elective surgery. This program is "mandatory" because Medicaid patients must obtain a second surgeon's opinion on the need for surgery before payment is authorized; however, actual payment is not predicated on the consultant's recommendation.

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*Follow-up response rate was 80 percent.

Massachusetts' Department of Public Welfare developed the program in conjunction with State medical foundations and other health groups.

The second opinion requirement is limited to eight surgical procedures, selected because of cost, and high non-confirmation rates, and their elective or non-emergent nature, i.e., surgery that can be scheduled at least three days in advance. They are:

Tonsillectomy and/or adenoidectomy
Cholecystectomy
Hemorrhoidectomy
Hysterectomy
Disc Surgery/Spinal Fusion
Joint Cartilage Surgery/Meniscectomy
Sub-Mucous Resection/Rhinoplasty/
  Repair of Nasal Septum
Excision of Varicose Veins

Five medical foundations, covering the same areas as Massachusetts PSROs, serve as State referral centers in handling the second consultation process. The first of these centers, Bay State Health Care Foundation, handles 40 percent of Massachusetts' hospitals, and began operation in March, 1977. Consultant lists are developed and maintained by the foundations; surgeon participants must be board-certified specialists.

The initial step in the process begins with the proposing surgeon, who must contact a foundation center on behalf of the patient. The center then acts as a clearing-house for medical records and telephone communications between the patient and consultants. Center personnel collect diagnostic information on the patient and arrange an appointment with a local specialist. This is accomplished through a "double blind" procedure, with the names of the initiating surgeon and the consultant omitted from records transmitted by the center. Referral center staff advise the patient of results of the consultation as well as his/her primary physician, and the initiating surgeon. A recommendation to perform surgery is reimbursable; if the recommendation is to defer, the patient may seek a third opinion under the program. In any case, Massachusetts will pay for the surgery if the patient and the primary physician agree that the procedure is still necessary. The patient is discouraged from using the consulting surgeon for the operation. Average turn-around time for the process, if the patient keeps the scheduled appointment, is approximately three weeks. Chart I diagrams the Massachusetts' second consultation process.

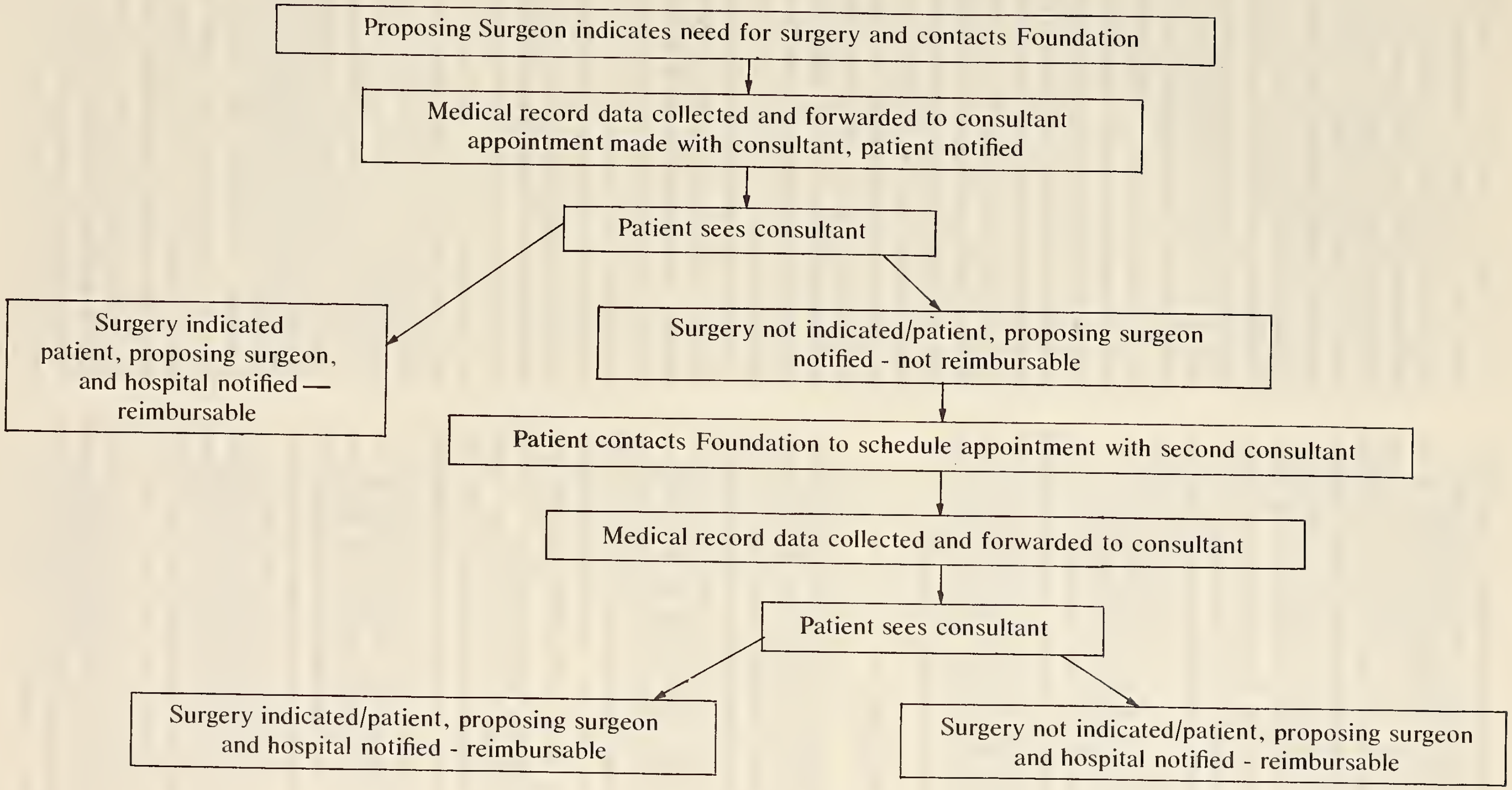
Physician consultants are reimbursed on a fee schedule, based on time allotted for the patient examination: $12.00, $20.00 or $30.00. It is the responsibility of the consultant to bill at the appropriate level. Necessary ancillary services are also reimbursed as part of the program. The referral centers handle all administrative details between the specialist and the Medicaid program.

There are several strengths in the Massachusetts Medicaid second opinion program. First, the State obtained physician support at the outset, with a conscientious effort to involve the physician community in development and administration of the program. Second, the program provides the recipient access to a specialist who makes a recommendation only after examination of the patient, ("the laying on of hands"). The program is "patient-oriented." It exists primarily for the benefit of a prospective surgical patient wishing to make an informed decision about the necessity of surgery. Since its thrust is patient education, the second opinion program does not conflict with PSRO authority to determine the medical necessity of an operation for Title XIX reimbursement purposes. Third, the referral centers serve a Statewide population and offer freedom-of-choice in the selection of a consultant provider. Fourth, possible conflicts of interest (referring patients to consultant physicians with close financial relationships) are avoided through the "double blind" referral mechanism. In addition, the consultant is discouraged from performing surgery on which he consulted, to prevent possible "patient-stealing." Finally, as the focal point, the foundation can collect and analyze program data to determine the program's effectiveness in reducing costs, and improving quality of care in surgical services reimbursed under Title XIX.

As mentioned earlier, several State Medicaid agencies are engaged in activities described as "second opinion" programs, for certain surgical procedures. However, the nature of these

CHART 1

MASSACHUSETTS' SECOND SURGICAL CONSULTATION PROGRAM


Proposing Surgeon indicates need for surgery and contacts Foundation
Medical record data collected and forwarded to consultant appointment made with consultant, patient notified
Patient sees consultant
Surgery indicated patient, proposing surgeon, and hospital notified — reimbursable
Surgery not indicated/patient, proposing surgeon notified - not reimbursable
Patient contacts Foundation to schedule appointment with second consultant
Medical record data collected and forwarded to consultant
Patient sees consultant
Surgery indicated/patient, proposing surgeon and hospital notified - reimbursable
Surgery not indicated/patient, proposing surgeon and hospital notified - reimbursable

programs is generally administrative, with fiscal control the principal goal. ''Paper reviews'' of patient cases are characteristically used to preauthorize surgery; the patient is rarely referred to a consultant, unless the supporting documentation is questionable. Such programs have important utilization control application, but cannot be accurately termed second opinion in the context of the generally accepted definition of second surgical consultation. Besides the critical lack of direct patient examination, another flaw in such approaches is the possible conflict with PSRO authority for determining medical necessity under Medicaid.

Based on a study of these programs, as well as the Cornell project, HCFA has developed a model for second opinion programs that it soon plans to promote in response to a Congressional recommendation to cut surgical costs and improve care in public health programs.

HEW Second Opinion

An HEW decision to develop and promote second surgical consultations in HCFA programs arose from hearings conducted by the Subcommittee on Oversight and Investigations of the Committee on Interstate and Foreign Commerce in 1975. Testimony at that time included information from the Cornell project, and extrapolations from McCarthy's data were published in a January, 1976 Subcommittee report, showing that 2.38 million unnecessary operations had been performed in the U.S. during 1974, resulting in approximately 11,900 deaths and costing approximately $3.92 billion.[19] According to the report, for the Medicaid program, unnecessary surgery caused approximately 1,700 unnecessary deaths. Costs of unnecessary surgery were estimated at $272 million in 1974.[20] The Subcommittee recommended that HEW research and develop a variety of approaches to combat unnecessary surgery in HCFA programs, including Medicare and Medicaid. One of these approaches was a national second opinion effort patterned on the Cornell project in New York.

In response to this Congressional recommendation, and after study of several extant second opinion programs, an HEW national promotional campaign is scheduled to begin September, 1978. The campaign is designed to encourage any prospective surgical patient to obtain a second opinion before consenting to an elective operation. HEW strategy includes a second opinion model developed by the Health Standards and Quality Bureau (HSQB) of HCFA.

Unlike current second opinion programs, the HSQB model is a flexible information mechanism without a formal referral center. It is designed to match a consultant with a patient whenever the patient initiates the search for a second surgical opinion. Medicaid will provide Federal matching for this second consultation as well as for any necessary ancillary services.

As part of the second opinion effort, lists of board-certified specialists will be developed by a variety of local health groups, including PSROs, Medicare carriers, State and local medical societies, and insurance companies. These organizations may also provide a telephone referral service for patients. Patients will be able to call their local Social Security district offices or welfare offices, or an HEW ''hot-line,'' to obtain toll-free telephone numbers of local referral groups.

Unlike the Massachusetts or Cornell programs, the patient will be responsible for arranging appointments, using names of consultants provided by the referral organization. Specialists will be discouraged from performing the operation on which they consulted and referrals will not be made to consultants sharing close financial ties. The decision to undergo surgery remains the patient's; the Medicaid program will reimburse for an operation, regardless of the consultant's recommendation, subject to final review and authorization by the appropriate PSRO.

The advantage of the HSQB second opinion model is its adaptability. Organizations which already have lists of surgical consultants can be asked to help in developing a second opinion program. This model also includes several essential characteristics for good Medicaid program adaptation: board-certified specialists, freedom-of-choice of provider, toll-free referral by specialty and location, avoidance of potential consultant conflict-of-interest, and final PSRO review.

Conclusion

States are being encouraged to cooperate with the national HCFA effort to establish some type of second opinion program for their Medicaid recipients, whether along the lines of the HSQB model, or the centralized systems of the Massachusetts Medicaid or Cornell programs. Promotion of the second consultation concept is based on substantial evidence of abuse for several surgical procedures, as well as on reports of cost savings in the Massachusetts and Cornell projects.*

Until current regulations are changed, HEW cannot mandate that States pay for second opinions. However, the overwhelming need to contain hospital and physician expenditures in State programs continues. Surgery represents a significant portion of these two costly services, and as such has been an important and visible target for cost control. Second opinion programs also serve to educate the public, as well as the medical community, to the possibility of inappropriate surgery. The cost-saving potential and patient education aspects offer incentives for State Medicaid administrators to establish second opinion programs, to improve the quality of surgical care for recipients, and to contain costs of their Title XIX programs.

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*Cornell figures for December, 1974, show an 8:1 cost-savings ration, while Massachusetts in October, 1977, tentatively gave a 4:1 cost-savings figure.

Karyn Sheridan is a program analyst in the Division of Policy and Standards, Medicaid Bureau. Previously, she worked two and one-half years for the Bureau of Disability Insurance, Social Security Administration, in Baltimore, Maryland. Ms. Sheridan received a B.A. in history from Bryn Mawr College in 1974 and a master's degree in administration from The Johns Hopkins University in 1978.

NOTES

1. U.S. Department of Health, Education and Welfare, "National Health Expenditures, Fiscal Year 1977," *Health Care Financing Administration (HCFA) Health Notes*, (5/78).
2. Eugene G. McCarthy and Madelon L. Finkel, "Second Surgical Opinion: Salvation or Sham?," paper presented at the HCFA Conference on Research Results from Physician Reimbursement Studies, Washington, D.C., (Feb. 22, 1978), p.7.
3. U.S., Congress, House, Subcommittee on Oversight and Investigations of the Committee on Interstate and Foreign Commerce, *Cost and Quality of Health Care: Unnecessary Surgery*, 94th Cong., 2d sess., Jan., 1976, p.32.
4. Interview with Dorothy Rice, Director, National Center for Health Statistics, 11 January 1977, as cited by McCarthy, "Second Surgical Opinion: Salvation or Sham?," p. 7.
5. Eugene G. McCarthy, et.al., "Second Opinion Surgical Program: A Vehicle for Cost Containment?," paper presented to AMA's Commission on Cost of Medical Care, Chicago, IL, (March 11, 1977), p. 2.
6. James McCord, "A Survey of Second Opinion Surgical Programs in the U.S.," report prepared for the Social and Rehabilitation Service, Department of Health, Education and Welfare by Systemetrics, Inc., Washington, D.C., (Feb. 1977), p. 40.
7. U.S., Department of Health, Education and Welfare, "Medicaid Management Reports, Annual Report, Fiscal Year 1976," Medical Services Administration (MSA), p. 26 and

   U.S., Department of Health, Education and Welfare, "Fiscal Year 1976—State Expenditures for Public Assistance Programs Approved under Titles I, IV-A, X, XIV, XVI, XIX, XX of the Social Security Act," Social and Rehabilitation Service, No. 77-04023.

   The derivation of the expenditures for elective surgery under Medicaid are based on similar computations by the Subcommittee on Oversight and Investigation, *Cost and Quality of Health Care* (1/76) found on pages 29-33. The derivation is as follows:

   Total Medicaid expenditures 1976 = $15.650 billion
   Inpatient hospital care = 31.7% of total expenditures
   Physician services = 9.7% of total expenditures
   41.4% of total expenditures
   41.4% of $15.650 billion = $6.5 billion
   From the House Report, 1/3 of hospital and physician costs are expended on surgery.
   30% of $6.5 billion = approx. $2 billion
   From McCarthy's paper, approximately 40% of surgery is for elective procedures.
   40% of $2 billion = $800 million
8. The Office of the Inspector General subsequently revised this figure from $600 million to a ballpark figure of between $200 and $600 million. The $600 million figure can be found in an attachment to a 6/6/78 memorandum from the HEW Secretary to the HEW POCs and Assistant Secretaries entitled "Action Plans to Reduce Fraud, Abuse and Waste."
9. C.E. Lewis, "Variations in the Incidence of Surgery," *The New England Journal of Medicine*, Vol. 281, No. 16 (10/16/69): 880-884.
10. J. Wennberg and A. Gittelsohn, "Small Area Variations in Health Care Delivery," *Science*, 182 (12/14/73): 1102-1108.

11. J. Wennberg and A. Gittelsoh, "Health Care Delivery in Maine I: Patterns of Use of Common Surgical Procedures," *The Journal of the Maine Medical Association*, 66 (5/75).
12. U.S., Department of Health, Education and Welfare, C. Gaus, B. Cooper, and C. Hirshman, "Contrasts in HMO and Fee-for-service Performance," *Social Security Bulletin*, vol. 39, No. 5 (5/76): 3-14.
13. James C. Doyle, "Unnecessary Hysterectomies: Study of 6,248 Operations in 35 Hospitals during 1948," *JAMA*, 151 (1/31/53): 360-365.
14. "The Quantity, Quality, and Costs of Medical and Hospital Care Secured by a Sample of Teamster Families in the New York Area," Columbia University School of Public Health and Administrative Medicine, 1962, as cited by Larry Frederick, "How Much Unnecessary Surgery? A Hard Look at the Evidence," *Medical World News* (5/3/76): 50-66.
15. Jacob Fine and Mildred A. Morehead, "Study of Peer Review of Inhospital Patient Care," *New York State Journal of Medicine*, 71 (8/15/71): 1963-1973.
16. Eugene McCarthy and Geraldine Widmer, "Effects of Screening by Consultants on Recommended Elective Surgical Procedures," *The New England Journal of Medicine*, 291, (1974): 1331-1335.
17. E. McCarthy, "Second Surgical Opinion: Salvation or Sham?" (2/22/78), p. 5.
18. J. McCord, "A Survey of Second Opinion Surgical Programs in the U.S.," p. 41.
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20. Ibid., pp. 32-34.

THE MINNESOTA DEVELOPMENTAL PROGRAMMING SYSTEM: ITS HISTORY AND APPLICATION IN ICF/MRs & SNFs

by WARREN H. BOCK,
KATHRYN ROBERTS, and
KATHY BAKKENIST

(EDITOR'S NOTE: The history of treatment of the mentally retarded in this country has been mixed. It has ranged from segregating the retarded from society, to work farms for the retarded, to protecting society from the retarded, to rehabilitation. Just as many of our attitudes are an amalgamation of various ethics, so has been our attitude towards the retarded. Some observers believe that the Puritan suspicion of any deviation from behavioral norms is a factor; others suggest that we believe goodness, truth and beauty to be interrelated and that deviation from these are wrong and, therefore, evil or ugly. Mental illness and mental retardation have often been synonymous in the minds of many. If one could hack through the thicket of emotional myths surrounding the condition known as mental retardation, one would ultimately arrive at a simple truth: mentally retarded persons are simply people who are more limited in their functioning levels than others. They are not "sick". The challenge is to maximize the actual capabilities of mentally retarded individuals, to enable them to exercise their rights to work out their accommodation with society, as must we all. In the last decade or so, mental retardation specialists have made great strides toward humane and positive treatment of the mentally retarded, treatment designed to maximize the individual's potential or strengths, rather than simply cataloging his/her deficiencies or weaknesses. This progress has not been without trial, however. The stereotypical attitudes still exist, and the large facilities, understaffed and outdated, still exist, facilities in which many retarded citizens are still segregated. This article describes one State's effort to combat both the stereotyped thinking and the "warehouse" approach to providing services to the mentally retarded.)

Introduction

The Minnesota Developmental Programming System (MDPS) is a comprehensive package of materials, procedures and training which enables patient care staff to design and implement individualized habilitation plans for the retarded or elderly person. While the cornerstone of this system is comprehensive behavioral assessment and habilitation planning at the individual level, several far reaching applications of MDPS at the State and National level have emerged. The purpose of this article is to describe the development and current status of MDPS and to define future project activities.

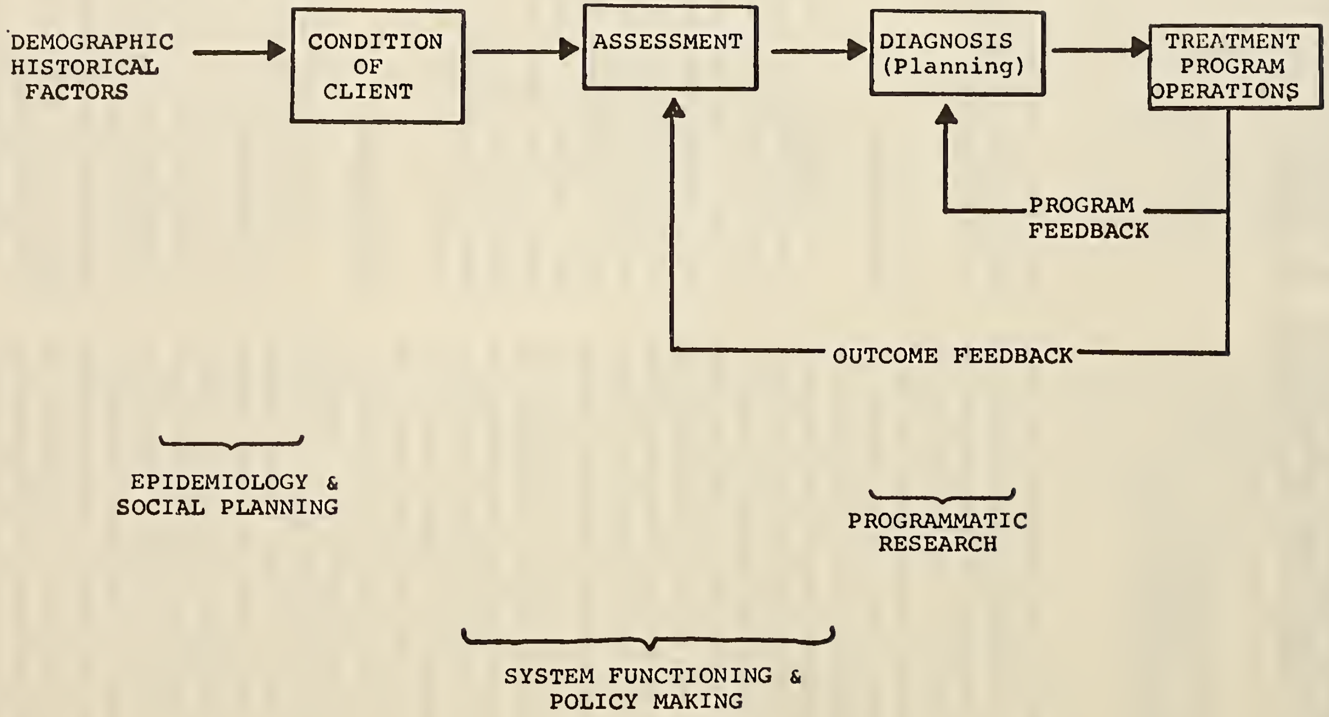
Background

In order to understand the relationships of each component of the MDPS, it is necessary to understand the overall conceptual framework on which the system was built. Figure 1 diagrams this framework. A central and planned bias of the system is immediately evident in the diagram—that of valid and reliable measures of the developmental states of clients, prior to, and while they are served by the care giving organization.

A second important characteristic of the system is that the model integrates operations and research, thereby permitting a "dynamic," or "on-line" evaluation model. The model does

Figure 1

THE MDPS MODEL



not describe where we are in Minnesota today, but rather describes where we expect to be once the data base is complete. To date, we have focused primarily on our model bias—the development of valid and reliable measures of client states and secondarily, on standardizing the operations component at the client and treatment team level.

The central purposes of this data-base design was the development of a system for collecting information on persons so that programs appropriate to their needs could be designed. The system included procedures for collecting and coding information and the software for entering those data into a data-base. In addition, there are various access procedures for users in need of both client decision and management information.

The information flow begins with demographic and patient program need data, which results in some objective condition previously unknown to the treatment agency. Thus, the screening and assessment operation becomes the critical event in the system and must be as error-free as possible, and must provide the information needed by the clinical teams in the diagnostic or patient program planning process. Therefore, an important feedback loop was built into the model, to look at program outcomes and to permit modifications in the screening and assessment measures and processes. This makes the process more indicative of client conditions, and responsive to available patient programs.

The diagnosis-treatment operations process is cyclical and continuous; it is the component receiving most of the project emphasis to date.

Finally, it can be seen that there are at least three levels of research possible in this model, as indicated by the lower categories of Figure 1. On the right-hand side of the model, we find programmatic research related to the effectiveness of the treatment and diagnostic activities. On the left-hand side, we deal with the scope of problems the system must treat and, in the most comprehensive research, the whole treatment system and its relationship to patient social needs. Given this conceptual background, we can now deal with the MDPS model in some detail.

The first formal version of the MDPS Behavioral Scales, the base component, was developed to meet the needs of the Minnesota's residential facilities for the retarded in 1973. Facility staff had expressed frustration with attempting to adapt existing assessment mechanisms to changing developmental philosophy, philosophy that focused on habilitation planning—individually determined and focused efforts, to fulfill each patient's fullest functional capacity. Habilitation planning means identifying the patient's developmental needs, establishing priorities in meeting these needs, and designing and carrying out programs to meet them. The programs should be reviewed on a regular basis, and the patient's progress measured, as well as the program modified in relation to patient progress. These actions may be thought of as assessing the patient's needs initially, designing a plan to meet these needs, and measuring how well the patient is faring under the program plan.

Staff complained also about the problems of bridging the gaps between patient assessment, habilitation planning and the patient evaluation. The State decided that a systematic approach of assessment and training should be developed to enable ICF/MR staff to comply with the "active training" requirement in Federal regulations. Under a Federal training grant received in 1974, the behavioral scales were refined and expanded, and development of habilitation planning materials and facility staff training packages were begun. During that same time, approximately 150 staff from private and public residential facilities were trained to use the system. Facility participation in MDPS was and continues to be voluntary in Minnesota.

The general acceptance of MDPS by facility operators, parents of the retarded, the State and health practitioners, and the subsequent demands for further services resulted in the funding of a three-year project to continue development. This was provided by the Chicago Office of Developmental Disabilities, Office of Human Development, HEW.

The MDPS has two major components—a client assessment, programming and evaluation system, and a data-based management information system. The client component of the MDPS is comprised of the behavioral scales, user and training manuals, program plan packet, technical manual, training materials for staff development, and a report-back system which provides the user with individual patient profile information. The report-back system includes several formats and analyses that support habilitation planning by an interdisciplinary team as well as provide data for State agency planning and patient care evaluation.

A notable feature is pre- and post-patient performance data. This information enables comparison of the developmental level of a person from one year to the next. One effect is that the facility's performance is measured along with the patient's. Other evaluation and research possibilities are opened up by the longitudinal nature of this data—comparison of facilities or patients by groups on a Statewide basis, or comparison of performance levels within age groups and so on. One interesting sidelight was our attempt to determine if there was a correlation between adaptive behavior levels and intelligent quotients (IQs). As might be expected, we found little predictive correlation between IQ and functional abilities. Thus, assumptions about educability or trainability of the retarded based soley on IQs may be detrimental to the individual, and most certainly represent a stereotyped approach. A sample page from the behavioral scales used to assess the patient is shown in Figure 2.

The second major component of the MDPS is a data-based management information system. This provided cumulative and summary information of agency/area/Statewide profiles of key variables in both patient groups and mental retardation program services.

The behavioral scales are in booklet form. Scoring instructions are provided with the scales and a response form used which is designed for computer scoring. The form reflects required client identifying information and provides information to measure the client's progress under his/her rehabilitation plan. The scales are designed to allow users to add additional data that are relevant to that patient's care plan.

The MDPS Scales consist of twenty behavior statements in each of eighteen behavior domains. The items are descriptive statements of behaviors such as "Listens to a story for three minutes" (representing the domain of receptive language) and "Arises and leaves from the residence so as to reach work or activity on time" (representing the vocational domain.) The items are scored in terms of whether the individual always performs the behavior, performs the behavior more than half the time, less than half the time, or never performs that behavior.

The eighteeen behavior domains are categorized functionally, with each domain representing a broad class of activity, as indicated by the titles given below:

Scales by Number and Title

1. Gross Motor
2. Fine Motor
3. Eating
4. Dressing
5. Grooming
6. Toileting
7. Receptive Language
8. Expressive Language
9. Social Interaction
10. Readiness and Reading
11. Writing
12. Numbers
13. Time
14. Money
15. Domestic Behavior
16. Community Orientation
17. Recreation, Leisure Time
18. Vocational

Most of the domains deal with activities in some area of daily life.

The twenty items in each domain are intended to exemplify behaviors falling within that domain, and represent the perhaps infinite number of behaviors that could fit into the domain.

An effort was made to focus on behaviors that most often represented behaviors critical to functioning as independently as possible, i.e., activities of daily living.

A user manual has been developed to provide overall system instructions and is tailored to meet unique information needs of both facilities and State agency.

A program plan packet is provided for each client assessed. This packet provides all the response forms necessary for the development and maintenance of individualized habilitation plans for one calendar year.

A technical manual describes in detail the system components as well as the research activities that have contributed to the current edition. The system operation at the provider level is shown in Figure 3.

Figure 2

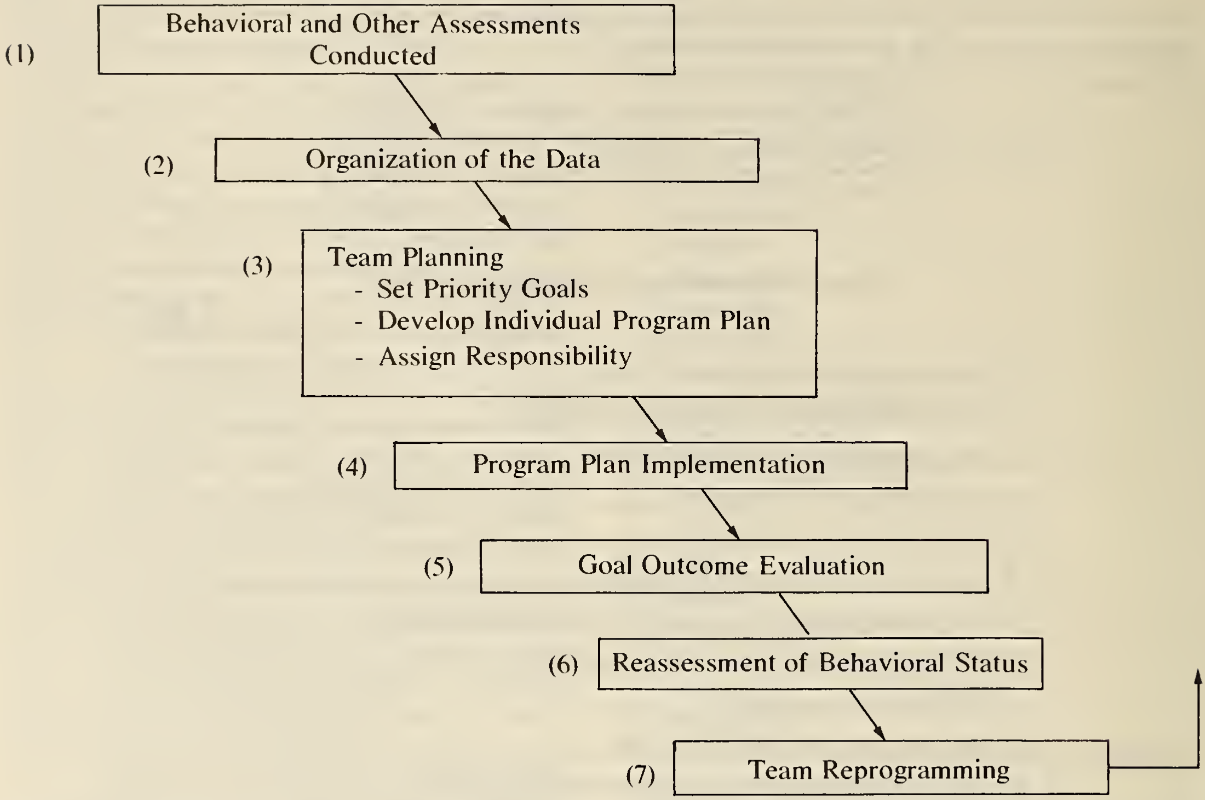
EATING

DIRECTIONS FOR MARKING ANSWERS	EXAMPLE
• Use a soft lead pencil only (No. 2 or softer). (Do not use ink.) • Make heavy black marks that fill the circle completely. • Erase clearly any answer you wish to change. • Make no stray marks on this answer sheet. • Mark only one answer for each question. Multiple marks cannot be counted.	WRONG ○✓○○ WRONG ○○⊗○ WRONG ○○○◔ RIGHT ○○●○

REMINDER: Establish a basal and ceiling level for **EACH** scale.

	Scale 3 Eating
1. Swallows soft foods that do not require chewing	1
2. Drinks, without spilling, from a glass or cup with assistance	2
3. Picks up food with fingers and puts food in mouth	3
4. Uses a spoon to pick up and eat food	4
5. Chews solid food	5
6. Picks up a glass and drinks from it without spilling	6
7. Eats a complete meal with little or no spilling (may use only fingers and spoon)	7
8. Drinks from a drinking fountain using hand or foot control	8
9. Uses a fork to pick up and eat food	9
10. Waits in line and carries a tray in a dining facility	10
11. Eats, supervised, in public without calling attention to eating behavior	11
12. Spreads butter with a table knife	12
13. Eats a complete meal with little or no spilling, using all normal dishes and utensils	13
14. Cuts food with a knife and fork	14
15. Takes proper portions when food is offered	15
16. Displays table manners such as politely asking for food to be passed	16
17. Serves self in a family-style setting	17
18. Selects and requests food from a limited menu by telling choice to person responsible for delivery	18
19. Selects a nutritious and complete meal when variety of foods are available	19
20. Orders and eats in public dining facility	20

Figure 3
SYSTEM OPERATION
(Provider Level)


(1) Behavioral and Other Assessments Conducted
(2) Organization of the Data
(3) Team Planning
- Set Priority Goals
- Develop Individual Program Plan
- Assign Responsibility
(4) Program Plan Implementation
(5) Goal Outcome Evaluation
(6) Reassessment of Behavioral Status
(7) Team Reprogramming

System Premises

The MDPS is built upon several premises:

1. Individual habilitation planning is a total process, of which assessment is only one component. Comprehensive behavioral assessment, however, is a cornerstone of the total process.

2. The most useful approach for assessment is the description of behavior; behavioral descriptions encourage objectivity, are neutral with respect to theory, and enable the application of a system of behavior change appropriate to the individual, without invalidating or diminishing the assessment.

3. Data obtained from criterion-referenced or domain-referenced instruments are essential to goal-oriented individual habilitation planning. Focus is upon natural behaviors significant in daily living rather than upon tests, special apparatuses, or requiring the examiner to simulate special occasions just for the purpose of testing.

4. Comprehensive behavioral assessment should involve the significant program participants. The users of the instrument should be the individuals and teams who are responsible for designing individual program plans. Preparation and competence of these individuals and teams should be appropriate to the performance of their job duties and any specialized training required for the use of the instruments should be provided as a part of the instrument package.

5. The operation of individual program planning systems should in every way minimize dependence on the "disease" model of classification, and every attempt should be made to avoid use of categorical labels which may inhibit the expectations of significant others and/or which may be in some other way detrimental to a person's life changes.

6. The universe of behaviors required for independent living, or for varying degrees of independent living, can be identified, agreed

upon, and classified into functional domains. These functional domains each have a range of behavioral difficulty so that the behaviors in each domain can be ordered in developmental sequence along the dependence/independence continuum.

7. Given the emphasis on deinstitutionalization and the fact of increased mobility of developmentally disabled persons within the range of services in a given community, the semantics of individual program planning should be simplified and somewhat standardized to enhance communication among and between providers.

8. Client-related decisions and individual program plans, however determined, must be consistent with the requirements of the Doctrine of the Least Restrictive Environment and other Federal and State regulations. These specify that each individual should have the right to live in the setting that provides the greatest opportunity for personal growth throughout life. Individual program planning systems based in major part on behavioral data and on expected outcomes expressed in performance terms more readily provide for necessary documentation of this consistency.

9. An assessment instrument for routine and large scale use must be minimally burdensome—reasonably brief, integrated into the total work flow, easy to use, and plausible—in order for it to be accepted and used meaningfully by front line service personnel.

10. An assessment system should also be useful as a basis for management information. Indeed, it should automatically generate the most useful of management information, the aggregated data on client status and progress. Management in human services exists at the program level, the local facility level and the level of regulation and funding. Each of these levels of management must plan, implement and evaluate programs in relation to client status and progress.

These ten premises underscore the MDPS. All have consequence on the delivery of services to persons who are developmentally disabled.

After nearly four years of operation, we believe these premises still valid. Emphasis on the individual remains the ultimate cornerstone.

System Application in ICF/MR Programs

The first two years of the project focused on the development of a client data base sufficient to permit instrument refinement and statistical analysis. To this end, over 20,000 assessments were completed in Minnesota, South Dakota, Missouri, Utah, Wisconsin and New York. A second major goal of that period was the design of a computerized system for data analysis and reporting. Finally, training in the use of the system was provided to approximately 1,500 staff persons caring for the developmentally disabled. Throughout this time user input was solicited; subsequently, all decisions on revisions were empirically derived from comments and suggestions of actual users of the system. Expansion of the system to better meet the needs of human services managers has recently been the focus of the project.

This project year (1977-1978) addressed three major goals. The first called for the reassessment of approximately 6,500 developmentally disabled persons in Minnesota (public and private residential programs.) Several facilities are now into their third round of patient assessments, which will provide longitudinal data for outcome evaluation of programs serving the mentally retarded.

The second goal dealt with advanced statistical analysis to redetermine validity and reliability of the revised scales. Preliminary independent reliability checks have reaffirmed the instrument's high reliability estimates. Test-retest and inter-rater reliability co-efficients were produced; these range from .79 to .94, med=.84, and .76-.99, med=.94 respectively.

Three pilot administrations of the MDPS Scales for low functioning individuals and children (MDPS Alternate Form C) have been completed and analyzed on samples of over 200 clients. This form is now in print and will become available for distribution the summer of 1978. This form was developed in response to requests by administrators of residential facilities with residents too severely handicapped to show development on the original scale. This same concern has been expressed by those facilities serving the high functioning individual. These patients "topped" off the scale. Another alternate scale will be developed to address those concerns. Plans are also under way to develop alternate forms for persons with cerebral palsy, epilepsy and autism.

This year also focused on completing an extensive factor and cluster analysis of behavioral data on approximately 3,000 clients. That effort produced the proto-type for a shortened scale. This scale, the MDPS-Abbreviated Form, which is comprised of eight, ten item domains, will be incorporated in the Minnesota Individual Information System (MIIS). This system will be used for Statewide needs assessment and planning and will be implemented in Minnesota, New York and South Dakota.

A third goal addressed staff development materials and training. A study was completed to determine what mode of training was most successful. Based on the results of this study, all training materials were revised, and were restructured to be self instructional for providers adopting MDPS.

As stated previously, use of the MDPS in Minnesota is a voluntary activity. A recent survey on the level of use in this State showed that approximately 80% of the 180 community residential programs use MDPS and at least 80% of 104 daytime Developmental Achievement Centers have chosen this assessment over the past three years and the results are on record in a central computer.

A Developmental Achievement Center (DAC) in Minnesota is a day program that provides training in basic self-help skills, habit training and prevocational services. Clients served range from profoundly to moderately retarded preschool age children, to adults who do not qualify for sheltered workshop training. The data will be used for evaluation of the most effective program and treatment approaches by the DACs. Additionally, agencies use the data to evaluate individual client growth and development on a year by year basis.

System Application in Skilled Nursing Facility—A Pilot

The MDPS is now being used on a pilot basis in a Minnesota skilled nursing facility, the Crest View Lutheran Nursing Home. This facility had been faced with problems of content and quality in charting and care planning. To date, charting has been basically medically oriented and problem-based. Plans of approach were limited and patient behaviors were characterized in maladaptive terms. There was an apparent need for increased specificity in record keeping.

The facility staff decided to move toward an interdisciplinary health team approach. In this context, the staff development coordinator at Crest View introduced MDPS. Although MDPS was originally designed for the developmentally disabled, MDPS staff believed that the system might well be applied to a geriatic long term care facility. Crest View's need for an integrated approach to patient care and MDPS' need for a pilot in the geriatric setting coincided. Because Crest View is representative of long term care facilities Statewide in terms of staffing, size, and population, it was felt that effective use of MDPS at Crest View would prove MDPS transferability to other LTC facilities.

Concerns did exist as to how the system would fit the geriatric population. Would these behavioral skills be applicable to eighty and ninety year old residents of a skilled nursing facility? Were these skills realistic? Can staff ask a population whose average age is eighty-five years old to improve their skills at this time in their lives?

Implementation was initiated through a series of five in-service training sessions held over a period of four months for all Crest View staff responsible for patient care. They were taught how to conduct a patient assessment, and how to write goals and objectives. A workshop was held to provide staff opportunity for assistance, feedback and support. A final workshop addressed the procedures regarding the patient care conference.

MDPS materials were distributed and the assessment process was initiated at the second training session. Staff were assigned a particular number of patients to work with, the number contingent upon how many hours per week they worked. Assignments were typically based on prior staff-patient relationships. A total of 122 residents were initially assessed by eighty staff members. Each initial assessment took from one and one-half hours to three hours to complete. All assessments were finished in one month, submitted to the computer, and print-outs were returned one month later. Based on this information, a completed profile of each resident was incorporated into every chart.

The reactions from the majority of staff and patients who participated in the assessment process were positive. The facility staff found themselves continually rediscovering residents. Typical of the inslights gained through MDPS were: "I thought that Mrs. J— was confused, but she can follow directions to comb her hair," or "Did you know that at ninety-one, Mrs. S—can actually thread a needle?"

Staff/resident relationships improved and significant new relationships between staff and patients were formed, not only because of the increased amount of time spent together for assessment and evaluation, but also by the renewed amount of human interest shown one another. Patients' self-esteem appeared notably higher. They enjoyed the increased and special attention. In particular, they were extremely proud of the tasks they could perform and the abilities they still had. After one eighty-nine year old woman had been asked to write something during the assessment process, she began keeping a daily diary. When family members became involved, they were amazed at some of the new found or rediscovered capabilities of their relatives.

Finally, staff began consulting with one another regularly regarding patient behaviors. These gains are continually being built upon. The only negative reaction noted was due to the amount of time involved in completing each assessment. However, as staff repeated and improved their use of MDPS, the amount of time it takes to adapt the system in a facility was significantly reduced.

To adapt the program fully at Crest View, two additional changes in MDPS were necessary. These involved the formats of patient care charting and the patient care conference. Formerly, the conference was an opportunity for medical reporting by the nursing staff from a problem-based recording form. To comply with State regulations regarding skilled nursing care, a charting form specific to long term care facilities was developed. That form was then, and is now, used by all staff instrumental in care planning, to develop comprehensive and individualized plans. Those plans delineate patient-centered goals and objectives as well as specific interventions for obtaining them. The assessment and care plans are shared by all staff—activities, nursing, physical therapy and social service—at the patient care conference, insuring full participation as well as coordination and continuity of care. In the care planning process, the MDPS computer profile is used to determine functional skill levels and needs. Goals and objectives specifically address need areas, for example, to improve functional skills. The information provided by the MDPS gives health team members in long term care facilities such as Crest View an opportunity to readily identify groups of patients with particular needs. As a result, it is believed that program planning can be specifically developed and directed, not only within a facility, but on a Statewide basis as well.

The behavioral scales give Crest View realistic and concise measurements of the patients' skills. Goal-oriented care planning allows any long term care facility to move beyond medical care planning and to focus on behavior in a developmental sense, an application particularly important to a geriatric population.

This is a significant factor, since long term care involves not only meeting the physical health needs of individuals, but addressing their psychological and social needs as well. Many long term care patients spend their last years in a nursing home, and the nursing home thus becomes their total environment. Failure to recognize the interrelationship of surroundings, staff, family, etc. and medical needs is detrimental to the patient, and can result in total dependency and diminished capabilities.

A comprehensive goal of MDPS is to eradicate old stereotypes and to substitute positive, realistically achievable objectives for a geriatric population, to move beyond the custodial concepts of the past and toward the development of an environment in which medical attention to the patient is augmented by attention to personal skills, growth, revitalized interests, and improved self-concepts.

Since Crest View's focus during the last six months has been at the patient need level, minimal opportunity has existed to use MDPS for facility management. Although as yet untested, one working hypothesis is that the Minnesota Developmental Programming System could be used to better effect cost controls as well as to assist in developing realistic and appropriate staffing ratios.

For example, MDPS could provide more effective measurements of levels of care, with comparison data as to the cost of delivering such care. This is turn could substantiate the need for better cost reimbursement mechanisms based on actual care rendered. Also, through the use of performance criteria, units for minutes of care per individual could be determined, and staff assignments made accordingly. This would create a more accurate means of assigning personnel within a facility on a work load/need basis.

The possibilities for systematic information through the use of the MDPS and data analysis are just beginning to emerge in long term care. Crest View is presently discovering its application to patient care planning and evaluation, and believes any long term care facility in Minnesota can benefit from such use of the program. More benefits will undoubtedly be found, as use of MDPS increases.

Crest View staff believes MDPS provides a unique opportunity to explore unlimited potentials in innovative patient care planning, education and research.

Summary

While all potential uses of MDPS have not yet been determined, we believe there are definite positive results to date. MDPS provides an effective tracking system for all mentally retarded or developmentally disabled persons in the State. The system provides for an annual behavioral assessment on all such individuals, with input into a central data processing center. Failure to receive an assessment in thirteen months results in notice to the responsible county, to find that person to assure that no one is lost in the service delivery system. Case management possibilities beyond this action undoubtedly exist. The aggregated data collected on facilities and patient plans, services and status will assist those persons responsible for patient placement to fit the most appropriate services to the patient's particular needs. Comparing patient skill development annually will facilitate placement of patients in less restrictive environments, and encourage their habilitation. State decision makers can use the aggregated data to determine whether Minnesota has a continuum of care. These data could be used to control overdevelopment of facilities for similar populations, and assure development of the types of facilities needed to meet the identified patiented patient population needs.

The implications of a systems approach to long term care programs are considerable in scope and, we believe hold significant promise in the area of quality assurance. The experiences we have described have received national attention. Plans for securing on-going research and development support have been initiated. The authors welcome further inquiries about the system from potential users.

- *Warren H. Bock, Ph.D. is currently Assistant Director of the Mental Retardation Program Division of the Minnesota Department of Public Welfare. He has also been the Principal Investigator of the Minnesota Developmental Programming System since its inception in 1973. Dr. Bock has worked with the mentally retarded since 1965 in a variety of roles ranging from teaching to the directorship of a residential treatment center for emotionally disturbed, mentally retarded adolescents. He serves as a consultant to the State department of Mental Hygiene in New York and has consulted in Missouri, Illinois, Alaska and Idaho. He holds graduate degrees in educational psychology and human service administration from the University of Minnesota.*
- *Kathryn R. Roberts, Ph.D. is currently the Coordinator of the Minnesota Management Model for Deinstitutionalization grant, housed in the Mental Retardation Program Division of the Minnesota Department of Public Welfare. She has also served as the Training Coordinator of the Minnesota Developmental Programming System since 1974. Dr. Roberts holds graduate degrees in mental retardation and administration from the University of Minnesota.*
- *Ms. Kathy Bakkenist is the Director of Social Services at Crest View Lutheran Nursing Home in Minneapolis. She has been directly responsible for the implementation and management of the Minnesota Developmental Programming System in that facility. Ms. Bakkenist received her MSW degree from the University of Minnesota in 1976.*

ALABAMA'S ELIGIBILITY UNIT: THE DISTRICT OFFICE SYSTEM

By WILLIAM A. BARRETT

Introduction

With the passage of the 1972 Society Security amendments (PL 92-603), creating the Supplemental Security Income (SSI) program, States had the option of either determining eligibility for Medicaid benefits for the covered population using SSI or pre-SSI criteria, or of accepting the Social Security Administration's (SSA) determination of eligibility for this program. Alabama chose to accept SSA's determination of eligibility for an SSI money payment as a basis for Medicaid eligibility, for reasons of administrative simplicity and economy.

However, eligibility for certain segments of the SSI population still remained to be determined by the State. These included Medicaid benefits for those receiving only State optional supplemental payments, the three month retroactive eligibility determinations for SSI recipients for the period prior to cash assistance, and eligibility determinations for the institutionalized population. An institutionalized person loses SSI eligibility if his/her income exceeds $45 per month, and eligibility needs to be redetermined by the State Medicaid agency.

Alabama had a choice on how to handle these areas. Staff in the County Departments of Pensions and Security, who already handle eligibility determinations for Aid to Families with Dependent Children (AFDC), could be trained in SSI policy as it applied to nursing home cases, or a new county unit could be formed. However, a separate eligibility unit at the county level would require at least 67 eligibility workers (one per county), in addition to supervisors and field staff to operate the program.

Alabama chose an alternate model of administration—a District Office approach. (See Table 1.) The State Medicaid agency wanted to take more responsibility for the program, and wanted to control the eligibility determination process for the highly expensive institutionalized population. With an initial caseload anticipated to be less than 5,000 cases, far fewer than 67 caseworkers would be needed.

What seemed most appropriate was a district office system similar to that used by SSA. The number of caseworkers could be limited, and only these relatively few people would have to learn in depth the complex SSI eligibility regulations. This also would create a group of special caseworkers whose only responsibility would be Medicaid eligibility determinations.

With the creation of this new unit, the pre-SSI eligibility representatives were transferred into the new District Office (DO) system.

The Alabama State Medicaid agency believes eligibility determination to be as important to the total program as claim processing. This new system gave the agency direct-line command, rather than indirect control (as through the prior county welfare system) over non-cash eligibility determinations. As a result of this, and other decisions, Alabama probably has the most complete, centralized Medicaid agency of any State. The single State agency is the same organizational unit as the Medicaid agency, encompassing almost all aspects of the program, with very little contracted out.

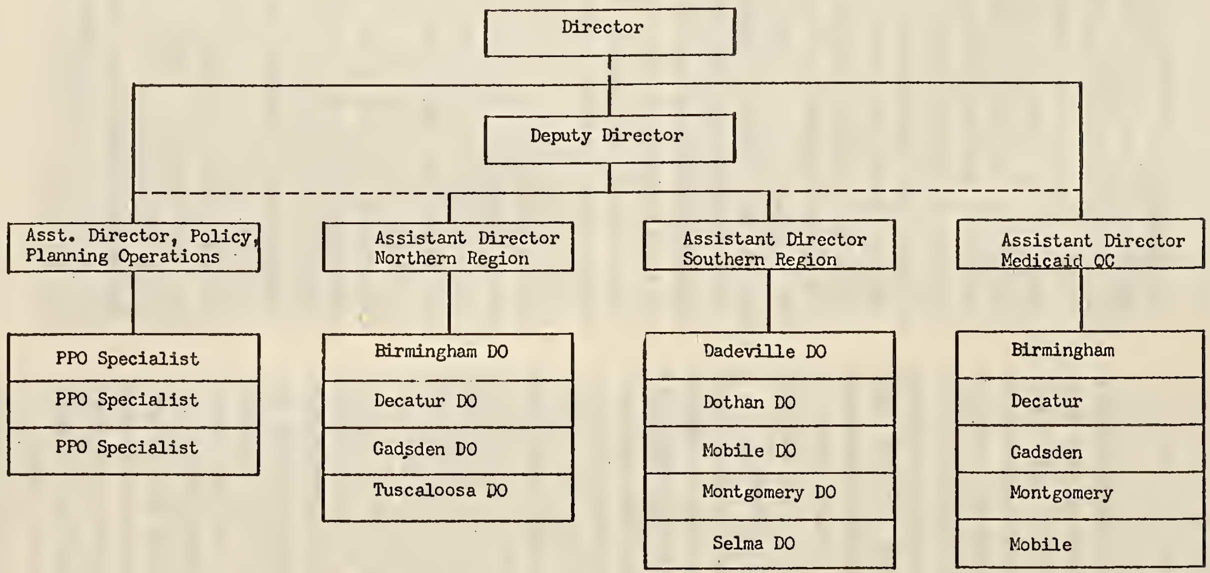
With the creation of the new District Office (DO) system, Alabama also put a management structure in place consisting of a statistical reporting system, a management information system, and quarterly audits, to monitor the system's effectiveness. The result is an efficient organization, and a low error rate, as reflected by a Medicaid Eligibility Quality Control (MEQC) error rate of 2-3%.

The District Office System

The Eligibility Unit of the Alabama Medical Services Administration operates out of nine

TABLE 1

Organization Chart for the Medicaid Certification Unit



District Offices, each located in a major population center for the area served. An average of eight counties is included in each district. The State is also divided into a northern and a southern region, each supervised by a regional Administrator. The two Regional Administrators in turn report to the Eligibility Unit program administrator at the State level. In addition, the Eligibility Unit contains the Office of Policy and Planning Operations, also at the State level, which handles policy interpretation, staff training, the quarterly DO audits, and MEQC.

As can be seen from the organizational chart (Table 1), the structure is relatively flat. The rationale for this type of organization is to make communication easier, and, by having fewer levels of administration, lower overhead. The staffing level for the DO is three eligibility representatives and one secretary-receptionist. When a fourth representative is added, an additional clerical is added to the office. No additional clerical personnel are hired until the number of representatives reaches seven. We find that the one to three ratio has worked well.

Alabama believes the traditional county office system isn't designed to efficiently handle eligibility determinations for the special Medicaid population groups. The major of these groups are the institutionalized population, and the three-month retroactive SSI eligibles. Case management for the long term care population requires considerably less travel than traditional welfare work, as the population, and its income and assets, are more stable. Much of the paperwork can be done through the mail.

Because of the SSI three-month retroactive eligibility determinations and its long term care recipients, the Medicaid office needs to have a close working relationship with the SSA DOs. Eight of the nine Medicaid DOs are now located in the same cities as the SSA DOs. This arrangement makes it easier for recipients who have to travel from one office to another. Better liaison and coordination between the different staffs result from this proximity, and from there being fewer actors (Medicaid and SSA) involved.

Alabama's Medicaid DO system allows eligibility staff to specialize. All caseworkers in the DOs are experienced and highly skilled in handling Medicaid-only determinations. There is better utilization of staff as their time is spent on Medicaid cases only, rather than being split between Food Stamps, AFDC, and Social Services. Caseworkers aren't pulled in many directions at one time, and can concentrate on doing a thorough job. An additional advantage of Medicaid-only caseworkers has been that the State legislature, interested in how the Medicaid program functions, has been more willing to approve positions, knowing they will in fact be used for Medicaid.

The DO system has also benefited the recipients. Service has been better, and there has been considerably less waiting time for them to learn if they're eligible. Fifty percent of all applications are acted on in less than two weeks, and ninety percent in less than 45 days.

Application forms are placed where they might be needed: nursing homes, hospitals, county welfare offices, and SSA DOs. No intake interview is needed for the special Medicaid groups to apply, since extensive verification of information occurs before an application is accepted. Applications can be completed at home, and much of the case work is handled by phone and mail.

In addition, in an effort to be a responsive government staff, the Eligibility Unit at all levels has a policy of not referring inquiries, but doing as much as possible to answer any and all questions asked. This includes answering inquiries in areas not directly under their jurisdiction, such as AFDC and SSI eligibility. Research is done for providers and government groups, and recipient inquiries are answered. Common questions asked by recipients include questions about what services Medicaid covers (in and out of nursing homes), and for which services a nursing home can charge a recipient. By doing this, the Unit has earned a reputation as being a place to turn to for answers regarding the Medicaid program. The Unit also acts as a trouble-shooter, handling such matters as straightening out nursing home complaints about not getting paid.

Office Duties

Clerical duties in the DOs include typing, filing, receiving visitors, setting up case records and initiating routine forms.

The eligibility representative determines and redetermines eligibility, and makes field visits when necessary. Each eligibility representative has as much control over his/her caseload as possible. They control the processing of applications from date of receipt to checking the eligibility file printout for accuracy, after a determination has been made. The average caseload per month is 50 determinations, or 30 applications and 20 redeterminations. The experience to date has been that a redetermination takes about as much processing time as an application.

Each representative is assigned a "territory," or a group of nursing homes for which he/she has complete responsibility for applications and redeterminations. In rural areas, territories consist of a geographic area, and in urban areas, certain nursing homes. Each month all DO representatives visit nursing homes, Social Security offices, and county welfare offices in their territory, spending an average of two to three days in the field. This is in line with the representative's duty to maintain a good working relationship with these groups. In addition, representatives go to special events and conferences. During their travels, they update nursing home, SSA, and welfare staff on policy changes, and verify eligibility. Part of the travel includes periodic training for SSA DO staff, to help assure that the SSA staff is aware of Medicaid policies, and that referrals are made when there is a possibility of Medicaid eligibility.

Each DO manager functions as a team leader and supervises clerical staff, in addition to carrying a caseload. The manager has the responsibility of seeing that the office operates as a unit, and reports any problems to the regional supervisor or to the Eligibility Unit program administrator. Problems that are forwarded may include: minor problems with interpretation of policy; case problems; or problems with personnel, equipment, or workload distribution. However, there is no direct supervision of the other eligibility representatives by office managers. This function is handled by the regional supervisor in the course of his DO visits.

With staff in several different locations and limited supervisory personnel available, supervision cannot take place on a day-to-day basis. Two supervisory tools, quarterly audits and a statistical reporting system, allow for periodic evaluation of individuals and office units. (These are described in more detail later.) For example, if the statistical reports show an increase in the number of applications pending over 60 days for any one representative, this would indicate a problem, and the regional supervisor would investigate. This is, of course, in addition to routine office visits.

Another method used is supervision by exception. Complaints from providers or recipients about a particular office or individual may indicate a problem. Complaints may or may not have anything to do with performance of an office, but at a minimum, they alert a supervisor to the possible existence of a misunderstanding.

Nursing homes sometimes complain about relationships with either individuals or District Offices. The supervisor, in handling the complaint, will talk with both the representative (or office) involved and the nursing home administrator. The emphasis, however, is on solving the problem, and not finding where the blame lies.

The regional supervisor provides assistance in policy interpretation, and identifies and solves DO problems. He communicates findings in the field to the program director and other divisions of the Medical Services Administration. These include such problems as difficulties in getting DO rent paid, or conflicting State policies.

In addition to supervisory duties, the role of middle level management is that of identifying problems in the field, and defining them in a way that is easily understood by upper level management. The mid-level manager must also find ways to get accomplished in the field the decisions made by top management. In the Eligibility Unit, workers at all levels have direct access to top management. Workers do take advantage of this access, which has a good effect on moral.

In selecting DO personnel, every effort is made to hire eligibility representatives with demonstrated competence. Each DO representative must have at least two years of eligibility experience, be able to assume total case responsibility, work as a member of a team, and be able to perform with a minimum of supervision.

The DOs try to operate in a spirit of teamwork and cooperation. The overall functioning and performance of the office is the responsibility of each member. Representatives must be able to perform secretarial and managerial functions when necessary. When new assignments are given to the DO, decisions on how to allocate the work are made by the group, with the regional supervisor acting in an advisory capacity.

Most of the communications for normal operations are informal. The telephone is used to the maximum. Written communication is used only when a record is required, or when a decision affects more than one office or level of administration. Informal conferences are a part of the regional supervisor's visit to the DO.

One other important benefit of Alabama's DO structure has been that similarities between offices have made it easy to transfer workers from one office to another, if such a need arises, enhancing flexibility of operation.

Program Management

As explained above, DO eligibility representatives have considerable responsibility and independence in handling their work, with direct supervision kept to a minimum. In order to have such a system, it was necessary to institute a management system that could do several things.

First, it was necessary to provide the representative with the information and resources needed to carry out work quickly and efficiently. Management, on the other hand, needed a monitoring system to assure that cases were being handled promptly, that workload was distributed equitably, and that problems could be detected. In addition, the eligibility determination process had to be structured in such a way as to keep errors at a minimum.

Controlling Error: The State Unit takes several steps to assure the accuracy of its work, since controlling eligibility errors is a prime concern.

The first step in controlling errors is staff training. Although new employees already have some familiarity with eligibility determinations and casework, they are immediately oriented to the Medicaid agency. The regional supervisor interviews and talks to new employees, and makes more frequent supervisory visits to them. In addition, there is a two-day training session held each quarter. This covers data and information systems in some detail. New employees are also given a walk-through of the computer facilities.

One difficulty encountered in the Eligibility Unit has been to encourage eligibility representatives, with their social worker orientation, to feel comfortable working with computers and computer systems. They feel a natural distrust and antagonism towards computers, which is at least partly based on experience; this is understandable, as anyone who has engaged in a computer/customer billing error fracas would agree. In order for eligibility representatives to make best use of computer resources, they need to feel confident with the system, and view it as a useful tool, existing to assist in the job. Although orientation alone can't accomplish this, the orientation combined with later working experience usually does.

The new employee is also trained in interviewing skills, to facilitate obtaining needed information during interviews. This is considered an essential skill.

Initially, eligibility representatives are assigned a caseload which is predominantly redeterminations, and in one program (one type of case.) The new individual is free to ask questions and to learn from senior members in the office. Additional help and explanation are provided as part of regular supervision.

The experience to date has been that it takes about one year for a new employee to develop a feel for the caseload, and to handle it with confidence.

A second step in reducing eligibility errors is the policy of verifying all points of eligibility. This verification may take one of several forms:

A copy of an original document, which is used to verify wills, deeds, pension benefits, and insurance;

Collateral verification, which may consist of a letter or statement from a person in a position to have detailed knowledge of the information needed, who is impartial if possible, and is capable of providing the information. Bank statements, appraisals, tax assessments, and sponsor-provided information[1] are examples.

Lacking these two, supporting evidence is used. This calls for obtaining such auxiliary information as marriage, baptism, medical or insurance records, which in combination give enough information and evidence to support a statement.

The sources and order of preference contained in the HEW MEQC manual are used extensively in the field.

An additional method for controlling errors has been the review of individual case records during supervisory review and quarterly audits. During the audits, auditors look for policy issues that are causing problems. Training or policy clarification is then focused accordingly. (The audit system is described in more detail below.)

As substantiated by the State MEQC record, the result has been a low error rate, with 3.9 percent of Medicaid dollars classified as "spent in error," compared to a National average of 8.6 percent for the April-September 1976 period. Alabama believes the considerable care taken in correctly determining eligibility is well worth the effort, since eligibility errors for the institutionalized are expensive ones, with nursing home rates averages $22 per day.

The Management Information System

Our management information system consists of three parts: a statistical reporting system; a computerized case status system; and quarterly audits of DOs.

District Office Audits: The quarterly DO audits are designed to discover program problems and to assess the performance of the office as a whole. Each area of administrative functioning is reviewed and local conditions affecting performance evaluated.

The audits are used by regional supervisors and the program administrator for planning purposes. Because the audits are concerned with office performance as a whole, problems in administration become readily apparent, problems which could be overlooked if individual evaluations were the major tool.

Each audit lasts one and one-half to two days. Each is conducted by three people: the regional supervisor and two staff members from the Office of Policy and Planning Operations. All District Office staff are also involved. During the audit, case records are read, and a face-to-face discussion of problems is held with staff. A six page review schedule is used for the audits, covering personnel, office administration, office procedures, record and information systems, physical plant, and case record review.

Problems are outlined during the review, and a schedule of goals and objectives designed to solve them. These objectives state what actions are expected from the DO, the Regional Office, and the State Central Office level, by whom, and by what date. In the spirit of each individual being responsible for all program aspects, people making complaints, or bringing up problems during these audit sessions, are also asked for solutions.

While statistical reports may show equitable distribution of cases, the on-site audit may reveal that there are inequities in the workload. In such a case, adjustments in territory would result. Quarterly audits also insure that professional relationships are functioning properly, as this is essential in a system where caseworkers have both large amounts of independence and responsibility.

Each office unit is expected to work as a team, with people helping each other, and with a complete interchangeability of roles. If, however, one office is found to be behind in work, or short of staff, QC reviewers are assigned to help out.

Workload Reporting and Statistics: The statistical reporting system tracks individual and office caseload, work received, work completed, and work pending. This system allows program managers to quantitatively measure performance, discover "old" cases, make adjustments to help solve these problems, and evaluate the overall performance of the Eligibility Unit.

The statistical report is completed by the DO office manager at the end of each month. Each office and each representative is identified by a code number. A statistician in the Central Office calculates totals and cumulative information, and prepares a program summary. After the reports are completed, an analysis is done that looks at individual and office statistics on amount and timeliness of work, and workload trends.

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[1] Nursing home recipients often must have a co-signer or "sponsor" on contract, responsible for bills not covered by Medicaid. This can be a friend, relative, church, or community organization.

Statistics measure quantity—nothing more. The process that statistics are designed to measure is assumed (that is, the action was carrried out or completed.) Workload statistics don't measure quality either; quality must be evaluated through quality control and supervision.

Statistics are most useful when used comparatively. A historical comparison, for example, shows increases and decreases in program activity. Present workload can be compared to a goal or standard. One basis for such workload standard is a historical average, which smooths out individual time period variations.

Many activities are needed to operate any program, and statistics can be gathered on almost anything. The Eligibility Unit tried to decide what areas were administratively important, and to collect data only in those areas. The work measured statistically falls into three general categories: work received and carried over from the previous month; work completed; and work pending at the end of the month.

Work received and carried over from the previous month consists of applications received during the current month, applications carried over from previous months, redeterminations due this month and carried over from previous months, and claims investigations received this month. (A claims investigation results from a question regarding eligibility on unpaid claims. The Unit does not usually have an application for the individual, but must investigate and determine eligibility status.)

Work completed refers to the number of awards, denials, and redeterminations disposed of during the month. This section also records the number of terminations and claims investigations completed.

The work pending section is divided into the number of days an application has been on hand since received. Eligibility suspensions are also recorded in this section.

Two sets of graphs (see Tables 2 and 3) are compiled to provide ready information on how this month's performance compares with last month's or last year's. Table 2 represents the work received by the program. Table 3 represents the work completed.

By analyzing the statistical data for two years and combining office audit information with activity studies, it was discovered that the average level of performance was 30 applications (and 20 redeterminations) per month. However some representatives receive and process more or fewer per month. Therefore, in measuring workload, the average of cases received and cases cleared is used. [(Received + cleared) ÷ 2 = Average] By using this average, the workload statistic measures both workload and work completed. This is then measured against a percentile curve based on historical averages.

Workload that falls within the middle 50 percent on the percentile curve is considered average, while that in the lower 25 percentile is poor, and that above the 75th percentile is excellent. The lower 25th percentile is for an average of less than 23 applications, the mean is 29, while an average of above 36 is considered excellent.

Actual evaluation of quantitive performance is done quarterly, and corrective action taken when indicated. As stated, this may take the form of territory adjustment, or additional staff or a change in caseloads.

Case File Status System: At the time an application is received, it is entered into the status file. This computer file tracks all applications pending for an initial eligibility determination. When a determination is made, the action taken is recorded in the *status* file, and the case (if approved) entered into the *eligibility* file. Each month the status file is run against the eligibility file as a check to make sure that all approved applications were entered into the eligibility file properly.

The eligibility file keeps track of all Medicaid eligibles, and contains a complete record of all case information on each eligibile person, including a copy of the SDX tape information. (The SDX, or State Data Exchange, is a copy of the SSI eligibility record sent over from SSA.) The eligibility file is organized by Social Security number, and is distinct from the welfare case file, which uses county welfare numbers. A remote terminal system will be introduced later this year, which will give eligibility

TABLE 2

MEDICAID ELIGIBILITY UNIT - WORK RECEIVED

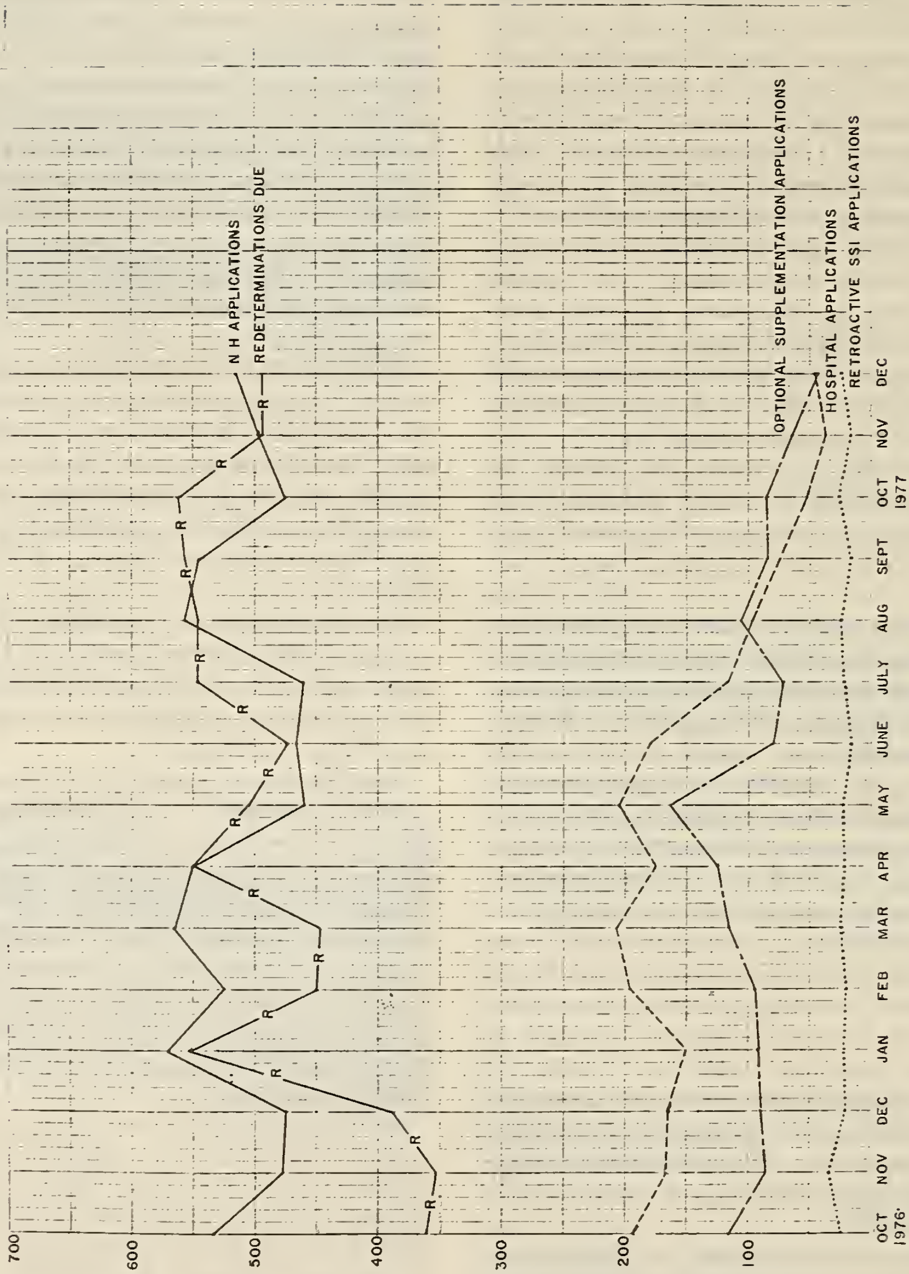
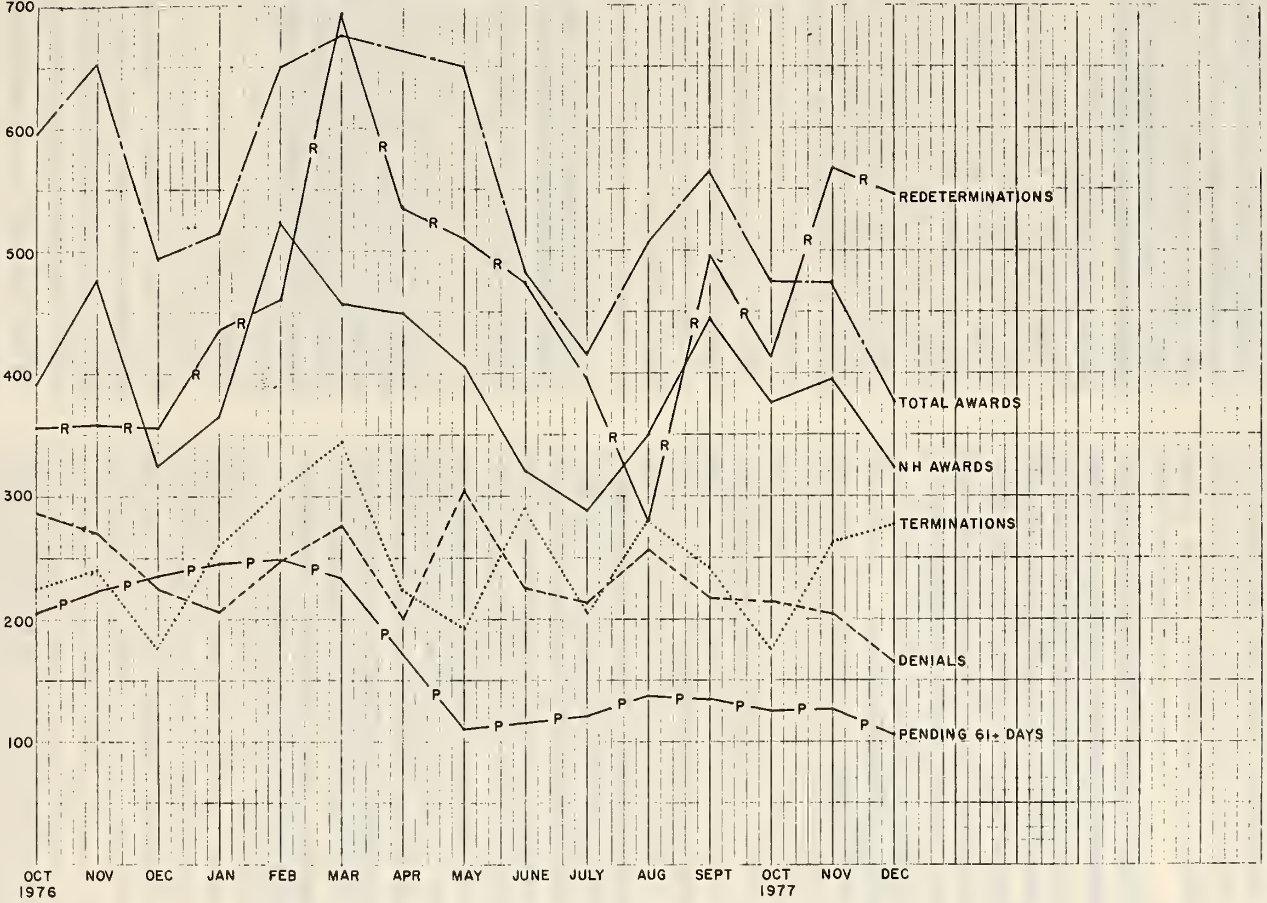


TABLE 3

MEDICAID ELIGIBILITY UNIT - WORK COMPLETED



representatives the added flexibility of accessing and updating records from a terminal in the DO.

From the status file, three printouts are generated: an alpha; a numeric; and a reviewer list. The alpha list contains all applications received during the Fiscal Year. It is arranged alphabetically by last name, and is printed monthly.

This list allows the DO to check if an application has been received previously, which office received it, the action taken, and the program for which the individual applied. If information already exists for an applicant, processing is simplified. The list also provides the Medical Services Administration information of receipt and disposal of all applications processed by the Eligibility Unit.

The numeric list is also a listing of all applications received and contains the same information as the alpha list. This list is produced quarterly, and is arranged by Social Security number. Because the list is numeric, it is random by program and individual. This characteristic is useful for several purposes. One is to check the distribution of time pending for a random sample of 100 applications. The median, standard deviation, and average number of days are calculated from the distribution. The median of time pending for applications tells management the age which 50 percent of the claims are older than, while the standard deviation checks the age spread of the caseload. A lower standard deviation and median indicate a more efficient operation. This test spots positive or negative trends, and gives managers a quantitative measure of performance.

The numeric list also is used to select the quality control sample for denied applications; and the regional supervisor, by sorting the list by representative number, draws a random sample of each representative's caseload for review. In these reviews, the regional supervisor checks on the type of verification used by the eligibility representative, and whether there is sufficient documentation to back up conclusions. If there were hang-ups in determining the case, the nature of these is examined. Each supervisor reviews 20 to 30 cases per month, of which the great majority check out, with findings being similar to those of MEQC—96-98% accurate.

The reviewer list contains a complete listing of applications that are classified as active in the status file. Produced weekly, and organized by DO and reviewer, this listing contains information on cases cleared, cases pending, and the program each is for. This listing also provides the individual representatives feedback on their performance, and aids them in scheduling work, as well as providing the regional supervisor information on the performance of the employees and different offices.

The Eligibility File: Once an application is approved, case information on that application is then recorded in the eligibility file. When the data are entered into the file, a printout is produced containing all information available on that client. The representative checks the printout for accuracy. This catches any errors, and gives the representative feedback on his/her performance.

During the determination process, if the representative has reason to believe that the applicant was previously certified by SSI or the Welfare Department, a printout from the eligibility file may be requested to check on this.

Programs which can sort the eligibility files by different fields of data were finalized this year, to supply useful information. The income code field identifies the source or sources of the client's income. When across-the-board changes in income were made by the Veteran's Administration and the Railroad Retirement Board, a listing by DO of all recipients receiving this type of income was produced, and initiating payment changes simplified. The sorting routines may also be used to compile caseload characteristics.

The office and representative codes identify the origin of the data. When transfers of cases are made either from one office to another, or from one representative to another, the files are updated to show current responsibility.

The capacity to suspend eligibility is built into the eligibility file. Action to suspend must be initiated by the agency that originally certified eligibility, and is taken when eligibility status is in question. This action prevents the individual from using Medicaid benefits while eligibility is in question. If the client is found eligible, benefits are restored retroactively.

Program Problems

A major source of problems in the Unit has been rapid change. The caseload of less than 5,000 in January 1974 has increased to over 12,000 today. Where there were originally 18 eligibility representatives, now there are 38. Total Eligibility Unit staff numbers a little above 60. The Unit initially established eligibility for one program and now has responsibility for six.

One of the programs, the SSI State optional supplement only population, is still a problem under Alabama's system. For this group, the applications originate at the county level, where financial data is collected. The case is then transferred to the DO, where data on resources is collected, and final determinations made. This dual system causes some delay and extra administrative complexity.

A second problem has been the use of data processing systems. The staff are in the third year with data processing. As files change and technology changes, confusion results from the differences in procedures and coding. New staff often have difficulty because they were not brought along as the system developed. As described earlier, training is being directed to this problem.

Another cumbersome area for the Eligibility Unit is retroactive SSI determinations. These cases necessitate the establishement of disability, as well as financial and categorical eligibility during the retroactive period. Determining eligibility for payment of one prescription alone can cost the State $200 trying to reconstruct the case.

Getting information to recipients about retroactive eligibility is difficult. In addition to a pamphlet that is sent to all cash and medical assistance applicants, Alabama also includes a notice with the Medicaid card telling new eligibles to ask their providers to submit all bills for past services. For SSI cases, the computer then kicks out these claims for referral to the Eligibility Unit.

In the past, the Eligibility Unit had problems because of SSA's slowness in terminating SSI payments to newly institutionalized cases, and indicating this information on the SDX. Unless the State is aware of the recipient's institutionalization, and excess resources, Medicaid payment for the full cost of care will erroneously be made. When SSI was initially established, the State mistakenly took for granted that SSI clients would report to SSA when they entered nursing homes, and that SSA would quickly reduce their payment levels.

To solve these problems, the State started, in Fall 1975, a full review of all nursing home cases before granting payments to the home. It was discovered then that the State had been losing about $30,000 per month in overpayments, because recipient excess income was not being applied to the cost of care.

Summary

The Alabama Medicaid Eligibility Unit is an experimental approach for determining eligibility of special groups not receiving cash assistance (SSI). It is organized on a district basis and has been effective in determining eligibility primarily for long term care patients.

This system of administration is possible when staff are selected and trained carefully, is economical when supervision by exception is practiced, and is feasible when there is an adequate management information system.

Administrative problems experienced have been the result of rapid growth, changes in the areas of defined responsibility, and the expanding use and dependence on automated data technology. However, efforts to solve these problems are underway.

Alabama believes the District Office approach, and the creation of a special Medicaid eligibility unit has been a success and a good solution to the problem of specialized eligibility groups, both for the recipients themselves and the State administration of the program.

William A. Barrett has been with the Medicaid Eligibility Unit as a Regional administrator since its inception in 1974. He is a social worker with an MSW from the University of Alabama School of Social Work (1972) and is currently working on a Doctorate in Social Work.

THE MEDICAID COST CONTAINMENT SERIES: THE URBAN INSTITUTE REPORTS

(EDITOR'S NOTE: This is the second in a series of reprints from a four volume study on strategies for controlling the costs of the Medicaid program, conducted by The Urban Institute during 1976 and 1977. The study's purpose was to analyze the impact of the 1974-5 recession on the health care efforts of the States, and to find more viable means of controlling program costs than those employed previously.

This excerpt, "The Extent and Cost of Unnecessary and Inappropriate Utilization," is a portion of Chapter II of the second volume, Controlling Medicaid Utilization Patterns. *The authors of the study are John Holahan and Bruce Stuart. The full study, or any volume of it, may be obtained by contacting the Publications Office, The Urban Institute, 2100 M Street NW, Washington, D.C. 20037. Reference should be made to URI 17700 when ordering.*

This portion of the study appears in the Journal *with the permission of The Urban Institute.)*

The Extent and Cost of Unnecessary and Inappropriate Utilization

It should be stressed at the outset that there are no universally accepted standards for unnecessary and inappropriate medical utilization, making it impossible to estimate with any accuracy either the extent of the problem or the economic costs associated with it. However, a public agency charged with cost containment need not operate in the dark, for there is considerable circumstantial evidence that the problem is significant in each of the three categories of misutilization.

1. Medically Unnecessary Services

A medically unnecessary service may be defined as any treatment procedure which could be eliminated altogether without harming the health of the patient. In fact, given some positive probability for iatrogenic complications, the elimination of unnecessary services should both reduce medical care costs and raise general health standards. The problem is that medical protocols are seldom specific enough for the attending physician or a review panel to state unequivocally which procedures are necessary and which are not. Attempts to get around this problem of legitimate differences in professional medical opinion have taken two distinct tracks. The first is site-specific and combines professional peer review with judgmental standards of what constitutes misutilization. The second concentrates on statistical differences in treatment levels across States, regions and delivery systems. Both approaches have centered on hospital care because of the presumption of large potential savings in this area.

A review and critique of the pertinent peer review literature is contained in several recent articles and need not be repeated here.[1] However, one series of site-specific studies of hospital utilization patterns does warrant mention because of the recent attention it has received in Congress and in the press. Organized and conducted by Dr. Eugene McCarthy, the studies analyzed the effects of second consultation for elective surgery on behalf of union employees in New York City between February 1972 and December 1975.[2] According to preliminary estimates, McCarthy found that an average of 24 percent of all surgical procedures initially recommended were not confirmed by the second opinion.[3] Despite the problems of extrapolating these results nationwide,[4] the Subcommittee on Oversight and Investigations of the House Committee on Interstate and Foreign Commerce (the Moss Committee) concluded from the evidence presented that 2.38 million unnecessary surgeries were performed in 1974 at a total cost to the American public of $4 billion.[5] The specific cost to the Medicaid program was set at $272 million.[6]

In a follow-up study, McCarthy traced the records of union members receiving negative indications for surgery on second consultation and found that three-fourths had not had the surgery performed within one to four years after the consultation.[7] Based on these new findings, McCarthy estimated that between 11 and 13 percent of all persons told by their physician to have an operation probably do not require surgery. While well below the Moss Committee estimate of 17 percent unnecessary surgery,[8] these figures, if correct, nevertheless reflect a substantial waste of resources.

Evidence of unnecessary surgery is also posited in the case of a number of recent cross-sectional analyses. For example, Wennberg and Gittleson have shown that the age-specific probability of tonsillectomies ranges from 8 to 62 percent in different areas of Vermont; a difference which they conclude cannot be explained by medical necessity.[9] Similarly, Gornick's finding that surgical procedures account for 34 to 36 percent of all Medicare discharges in the Northeast but only 25 to 27 percent in the South cannot be "explained by variations in the patient characteristics examined."[10] Cross-county as well as cross-National studies have tended to show that the number of surgeries is in proportion to the number of surgeons—and not the medical need for surgery.[11] A recent study of differences in surgical rates under the FEHBP* found that the probability of a subscriber having had a tonsillectomy by 1970 varied from 41.3 percent (Blue Cross) to 10.5 percent (Prepaid groups).[12] Other studies of surgical practices in prepaid groups and HMOs have consistently shown lower rates of surgery (and hospital utilization in general) than under traditional financing-delivery systems.[13]

Next to surgery, overlong hospital stays (and, to a lesser extent, overlong nursing home stays) have received the most attention in the literature.[14] Just as a patient may be admitted to a hospital or nursing home unnecessarily, "legitimate" patients may stay beyond the point of medical necessity. Here, too, the circumstantial evidence of misuse of resources is considerable, but, unlike the case of unnecessary surgery, most analysts are hesitant to suggest that extended stays serve no medical function. Rather, the majority opinion appears to be that medical care in such cases could be provided more cheaply in another setting; for this reason, discussion of the seriousness of the problem will be deferred to the next section.

While hospital care is an obvious target for cost containment strategies, there is no **a priori** reason to suspect that unnecessary utilization is any more prevalent here than in other forms of medical treatment. Overuse of drugs,[15] antibiotics[16] and dental care[17] have all received attention in the recent literature. However, the one area that has received very limited exposure is perhaps the most obvious of all; namely, medically unnecessary physician visits. There are a number of reasons for this apparent oversight. First, a large percentage of all physician contacts are patient-initiated; public programs have, with few exceptions, been hesitant to place any administrative limits on patient access (it is, of course, largely through the imposition of utilization controls that statistics on misutilization are generated.) Secondly, one of the expressed purposes of the Medicare and Medicaid programs is to increase physician access on behalf of the poor; program administrators have tended to view the resulting increase in utilization as an indicator of success and not as a potential area of failure. Finally, and perhaps most importantly, the increasing emphasis on preventive health care has led to a general, albeit unwarranted, presumption that the more pretreatment patient-physician contacts, the better. Needless to say, the lack of information on a problem is no guarantee that the problem does not exist. Physician resources are wasted in a medical sense through the demands placed on the system by the worried well and by those seeking social contacts rather than medical care. Similarly, it is reasonable to assume that some percentage of physician return visits and specialist consultations are also medically unnecessary. In neither case is the magnitude known, nor is it known whether the problem is greater for Medicaid eligibles as opposed to the general population.

2. Medically Inappropriate Utilization

The notion of medical appropriateness has both a clinical and an economic side. Any treatment setting may be appropriate in a medical sense if it leads to the desired outcome of improved health status. But some settings are more expensive than others, and it is sound economic wisdom to use the least costly alternative if the health outcome is going to be the same. Unfortunately, because the outcome can never be *exactly* the same, discussions of appropriateness invariably hinge on some trade-off between medical quality and economic interests. The existence of such trade-offs (even though they may be expressed implicitly rather than explicitly) makes it difficult to define inappropriate care, let alone assess its significance. Lacking a precise definition, the typical rule of thumb is to consider a treatment inappropriate if the medical consequences of a lower-cost alternative are slight, compared with the economic benefits of choosing the alternative.

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*Federal Employee Health Benefits Program

Attention has focused on three such alternatives: the use of nursing home or home health services instead of extended hospital stays, the performance of minor surgery on an outpatient rather than an inpatient basis, and the conducting of diagnostic tests on an outpatient rather than an inpatient basis. Treating these issues in reverse order, the classic study of inappropriate diagnostic admissions to hospitals was conducted by Anderson and Sheatsley in 1967.[18] The authors examined a representative sample of surgical, medical and diagnostic discharges from Massachusetts hospitals over a 12-month period and found that the percentage of diagnostic admissions not requiring hospitalization was nearly double the rate of inappropriate admissions in either surgery or medicine. While the utilization review procedures promulgated by Blue Cross, Medicare and Medicaid may have reduced the incidence of such admissions (estimated at 23 percent in the Anderson and Sheatsley study) since 1967, it is highly probable that room for improvement still exists.

The idea that many simpler forms of surgery, as well as diagnostic tests, can be effectively performed on an outpatient basis is not new. However, the recent development of "surgicenters" and the continued growth of HMOs have spotlighted the opportunities for substituting cheaper alternatives to inpatient treatment. In his statement before the Moss Committee on national health insurance, Edward Hughes testified that, in one prepaid group practice, nearly 25 percent of all general surgical procedures were performed on an ambulatory basis.[19] Hughes concluded that upward of 20 percent of all surgical treatments now performed in hospitals could be accomplished in outpatient settings, assuming, of course, that such settings are available (which is not the case in most parts of the country.) Where outpatient surgical clinics have been established, savings in hospital days are significant. For example, according to one study, such a clinic saved 34,500 hospital days in Phoenix over a three and one-half year period ending in 1974, with commensurate dollar savings to area residents.[20]

Inappropriate length of stay—regardless of admission diagnosis—is generally considered to be the primary source of unnecessary hospital utilization. The evidence (and supporting methodology) is very similar to that presented earlier for surgical treatments. The site-specific peer reviews studies invariably show that hospital stays could be shortened without adversely affecting the health of patients.[21] A study by Zimmer in 1974 exemplifies the typical findings of "significant" bed misutilization found across hospital departments.[22] Zimmer defined misutilization as (1) unnecessary admissions, (2) delays in hospital procedure or (3) delays in discharge. Of the three, delays in discharge accounted for over 82 percent of the inappropriate utilization in the hospital studies. Overstays were directly correlated with the length of the hospitalization episode: 4.9 percent of short stays (1-7 days) were judged inappropriate, but a full 24.6 percent of long stays (60 days plus) were considered to incorporate misutilization of hospital resources. Other hospitals face different problems. In a 1972 study conducted by Paul Gertman, for example, 54 percent of inappropriate hospital days in Baltimore were related to delays in performing or receiving diagnostic test results, and 67 percent of inappropriate days occurred in cases involving lengths of stay of 12 days or less.[23]

The cross-sectional studies are even more striking. A report prepared by Clifton Gaus for the Social Security Administration early in 1976 found "inexplicable" differences in Medicare length of stay across 65 conditional PSRO areas.[24] Diagnostic-specific lengths of stay (for an average of 15 diagnostic groups studied) were found to vary from 7.2 days in two California PSRO areas to 13.8 days in Kings County, New York. In the case of surgical admissions, pre-operative days varied from an average of 1.9 days in four Western PSRO areas to 3.9 days in two Eastern PSROs. Postoperative days varied from 6.4 in San Joaquin to 10.5 days in Kings County. Such East-West differences in length of stay are corroborated by other studies including the Gornick report, discussed previously, in which Medicare discharges for appendectomies showed a mean length of stay of 11.2 days in the West compared to 16.1 days in the northeast.[25] While care must be taken in interpreting these and similar results,[26] it is clear to most observers that such differences indicate a wide latitude in regional definitions of medical appropriateness. If the definitions were standardized, some net reduction in average length of stay could be expected.

Interregional variations in hospital utilization are minor compared to nursing home use differentials. As in the case of surgery and hospital utilization in general, the actual use of skilled nursing facilities (SNFs) and intermediate care facilities (ICFs) appears to be more highly related to differences in the quantity of supply than to any objective measure of need. Research into these differences and their underlying causes has been woefully neglected in the literature to date. But recent evidence presented by the Urban Institute suggests that they cannot be ignored. In Wisconsin, for example, there are currently 101.9 SNF and ICF beds per thousand elderly persons, with a corresponding residency rate of 81.6 per thousand, compared, respectively, to rates of 21.5 and 19.6 per thousand in West Virginia.[27] It is hard to imagine that these differences of nearly five-to-one can be explained by objective variations in medical need between the two States. In part, the low ratio of nursing home supply in West Virginia and other States such as South Carolina, Virginia and Arizona may reflect a conscious decision to ration these services among persons with varying degrees of medical need. But it is just as reasonable to assume that States with high supply ratios are providing a form of housing subsidy essentially unrelated to the necessity for medical care. Direct housing subsidies plus supervised home health care and homemaker services may well represent a less expensive and equally efficacious alternative for many current nursing home residents.

3. Socially Inappropriate Utilization

A third category of misutilization is the commitment of medical resources beyond the point where costs exceed the benefits of treatment. The value of health and, indeed, of life itself may be inestimable in individual cases; yet society as a whole is forced to make choices as to how much of its scarce resources to allocate for medical care as if these values were known. Since the use of resources for medical services precludes employing these same resources elsewhere, it follows that, at some point, further expenditures will not produce benefits commensurate with costs. The question, of course, is how to determine when that point has been reached. Is it 8.6 percent of GNP, as is currently the case? 10 percent, as some have projected for 1980? Or higher yet? Clearly, no easy solution is at hand, but, just as clearly, it is a problem faced each time a State legislature decides to expand or contract its Medicaid program. It is from this perspective that the allocation question is germane to the issue of utilization control.

Cutting medically unnecessary procedures represents the simplest case, since the only costs incurred are administrative. Similarly, the reduction of inappropriate medical procedures is relatively unambiguous, since the cost in reduced medical "quality" is presumed to be slight. However, what happens when we enter what Havighurst and Blumstein describe as the "quality/cost no man's land,"[28] or more precisely, the area in which limiting utilization may prove cost-effective but which nonetheless may result in a measurable decrease in the quality of care? Should case-specific utilization controls be employed in these instances? Logic suggests that they should because the sum of the quality losses arising from such trade-offs could presumably be minimized only if each case were judged individually. However, the administrative cost of this approach, to say nothing of the problems associated with its enforcement, precludes its implementation.

Even if the curtailment of socially inappropriate utilization could be handled more readily through other cost containment mechanisms (specifically, categorical benefit limitations and patient cost sharing), there is still the possibility that inadequately designed utilization controls may themselves contribute to a misallocation of resources. In fact, Havighurst and Blumstein argue that exactly this will happen when PSROs (Professional Standards Review Organizations) begin to grapple with the "quality imperative."[29] For this reason, it is important that the notion of socially inappropriate utilization be kept in mind, even though the agency charged with utilization control may not have the administrative jurisdiction to reduce its impact in a direct sense.

4. Fraud and Abuse

Because utilization control represents a means of monitoring and regulating patterns of usage and provision of medical services, it has the potential not only to curtail unnecessary and inappropriate care, but also to reduce certain classes of fraudulent medical practices. The existence of fraud and abuse in the Medicaid program has been the topic of considerable Congressional and State debate in recent years, with most of the attention focused on the problem of ineligible recipients. However, fraudulent treatment and billing practices represent an equally important area of public concern. This type of fraud may take one of two forms: the provision of services which the provider knows to be medically unnecessary and the billing for procedures not actually provided (or double billing for the same procedures). The first type is probably the more prevalent, but because it is nearly impossible to prove motivation other than "treatment in the best interests of the patient," these cases tend to get mixed in with those arising from honest differences in professional opinion. The second type is more easily identifiable because it is only necessary to check with the patient to see whether the billed service was actually rendered. Even in these instances, however, a provider who bills the State for a few randomly placed "non-services" will, in all probability, never be caught, simply because most detection systems are designed to catch only the large-scale and consistent violator.

For these reasons, it is difficult to estimate the actual extent of fraudulent utilization practices in any particular Medicaid program. Not surprisingly, most of the published evidence is based on sporadic but "spectacular" cases involving, for example, the recent nursing home scandals in New York City,[30] the recent discovery of fraudulent laboratory and clinic practices in Illinois and Michigan[31] and the periodic Federal audit reports which show a lack of proper control mechanisms in various State Medicaid programs.[32] It should again be emphasized, however, that a problem cannot be assumed to be insignificant simply because current systems of empirical verification are inadequate to the task.

5. Measuring the Cost of Misutilization

An accurate assessment of the economic cost of misutilization and abuse under the Medicaid program requires knowledge of both the number of cases occurring at a particular time and the net savings to be derived from each case eliminated. As mentioned repeatedly, the first requirement can seldom be fulfilled. However, even circumstantial evidence of misutilization is useful in estimating costs, provided that some minimum analytical criteria are met. The first requirement is that the evidence be based on a valid study design including consistent definitions of what constitute misutilization and what causal factors are associated with its presence or absence. For example, it is not uncommon for utilization rates to drop immediately after the initiation of a control mechanism such as utilization review or second consultation. Can the difference between the old and new rates then be used to estimate the former degree of misutilization? Not necessarily. If the rate differential turns out to be temporary, it could be ascribed to Hawthorne effects rather than to a true change in provider behavior. One classic instance of just such a sequence of events is found in the case of the New Jersey Blue Cross Approval by Individual Diagnosis (AID) program.[33] Alternatively, the rate differential might be due to factors not at all associated with the imposition of the control. The purported reductions in length of stay under the CHAP program in Sacramento[34] have recently been questioned on the methodological grounds that length of stay had been declining steadily before the CHAP was begun.[35]

If and when the validity of the evidence can be assured, the next step is to test whether the results can be generalized. Virtually all of the site-specific peer review studies of misutilization can be criticized on this basis. There is simply no way to prove that the existence of significant overutilization in one hospital, for example, is evidence of a widespread problem without substantial corroborating results from other case studies. Moreover, since the criteria for judging misutilization tend to vary widely from case study to case study, extreme caution must be taken in generalizing what appear to be unanimous results. Cross-sectional analyses of utilization patterns avoid this problem but are beset with another of equal magnitude; namely, the difficulty of establishing unambiguous statistical norms for appropriate utilization. In both cases, results obtained for one population group may not be appropriate for another with different characteristics. Even if utilization patterns are correlated to age and primary diagnosis, there may well be justifiable reasons for setting different standards for what constitutes misutilization among Medicaid recipients, as opposed to misutilization among other more affluent populations.

Nevertheless, attempts to measure potential savings in Medicaid utilization are of some value in public policy decisions. At the very least, pilot studies can target the areas where analysis is most needed. When it comes to actual calculations of dollar savings, however, a final methodological point becomes important. Any savings attributed to misutilization must be realizable: administrative and other expenses associated with a control program must be subtracted from gross estimates of the cost of misutilization before actual savings can be calculated. In addition, any estimate of net savings must based on the *marginal*, not the average, costs of misutilization. Two examples should serve to clarify this latter point.

If, for instance, misutilization takes the form of surgical or diagnostic procedures performed on an inpatient rather than an outpatient basis, the true cost of misutilization is the difference between the savings realized in reduced hospitalization and the extra costs that would be incurred in treating the patients in an outpatient setting. If appropriate outpatient settings are not available, then, clearly, no savings can be realized. The Moss Committee's estimate that $150 million in Medicaid funds could be saved by performing approximately 500,000 surgeries per year on an outpatient basis is highly problematical because it is doubtful that current outpatient surgical facilities could handle this extra load of cases.[36]

The second example concerns savings attributable to reductions in unnecessary (as opposed to inappropriate) hospitalization. Again, the Moss Committee findings present a useful target. Although the elimination of unnecessary surgeries may not require significant extra medical treatments in lieu of surgery (an assumption which in itself is questionable),[37] it is still necessary to restrict the cost estimate to realizable savings in reduced hospitalization. Not only did the Committee use hospital cost statistics for New York State (where costs are among the highest in the nation) to generalize their estimate of nationwide savings; they also based their calculations on the *average* cost per patient day.[38] By definition, the average cost per day is determined by dividing total hospital costs by the number of patient days. The resulting figure includes a prorated amount for all cost categories, including depreciation, interest, capital equipment and salaried labor. None of these costs will be reduced if a smaller number of patients is admitted. In fact, because 60 to 80 percent of all hospitals costs are fixed in the short run,[39] the only savings immediately realized are the marginal costs of food, drugs, tests and other treatment-specific items. Therefore, the Committee's conclusion that $4 billion could be saved annually suffers from a serious upward bias.

In the long run, of course, all costs are variable. What cannot be realized in a year or two may represent potential future savings, *provided* that capital and other fixed cost elements contract to serve the lower capacity requirements. The proviso is important, for unless hospitals voluntarily reduce per capita bed capacity, some regulatory mechanisms, such as certificate of need, will be necessary to ensure that future bed capacity is planned to meet only medically necessary cases. One cannot assume that such planning capability exists (it does not), nor can one assume that when and if the capability is developed, it will be properly applied. Moreover, if future hospital bed needs could be allocated precisely, the net savings attributable to reductions in future misutilization would still have to be discounted to present values, in order to accurately reflect the savings potential of current efforts at utilization control. The investment in bed capacity for a general hospital is typically designed to last up to 40 years or more. If one were to assume that the "average" bed had 20 years of useful life left in it, the present value of retiring that bed from service would amount to roughly one-sixth of its capital and associated staffing costs calculated at current rates of interest. In other words, even though the returns to bed retirement may represent significant future savings, they are relatively small in current dollars.

6. Causal Factors in Misutilization

The true cost of misutilization is the savings potential under an optimal utilization control program; in other words, the tractability of the solution is as important as the magnitude of the problem itself. Two basic types of solution are possible. A control system may be designed to eliminate the underlying factors which create misutilization (causal targeting), or it may be designed to reduce the deleterious effects associated with misutilization (symptomatic targeting.) In general, causal targeting is considered the superior approach, but symptomatic targeting may prove expeditious in terms of short-range results. In either case, confusion over causality may lead to the imposition of inappropriate control mechanisms and to less-than-optimal returns from the program.

Who is responsible for the misutilization of medical resources? The general assumption is that it is the health practitioner in his role as direct provider of services or as the person who recommends and prescribes treatment regimens. The legal rationale for this assumption (in the case of medical services) is derived from State medical practice acts specifying that only physicians may practice medicine. Because unnecessary or inappropriate medical treatments can only be prescribed by physicians, then, clearly, physicians are responsible for the problem—or so the argument goes. Moreover, it is frequently asserted that physicians are motivated to perform unnecessary treatments because of the financial incentives under fee-for-service payment mechanisms; that they prefer "inappropriate" treatment settings, such as hospitals or nursing homes, for their own personal convenience or because inpatient facilities are available to physicians without charge; and that they possess a monotechnic view of medical care which leads to socially inappropriate treatments. It is further alleged that physicians are quick to pick up new medical technologies which are resource using (e.g., CAT scanners) but slow to incorporate technologies which are resource saving (shortened postsurgical hospital stays, for example.)

While there is, undoubtedly, some truth to these allegations, they should not be overstated. Misutilization can and does arise from patient pressure for treatment that physicians would not otherwise recommend. Patients may be motivated to demand inappropriate services for a variety of reasons, including a desire for companionship, misinformation on the efficacy of treatment procedures, unstable home environments or simply the fact that insurance coverage makes treatment "free" at the time of delivery. In such cases, a utilization control focused on physician behavior would represent an example of symptomatic targeting, albeit one which might well be effective given physician control over the treatment process.

Symptomatic targeting on the physician will not be effective, however, if the misutilization rests outside the physician's zone of authority and immediate influence. Such is the case whenever misutilization is the product of institutional or health system inefficiencies. The most obvious example of long-run inefficiency, hospital overbedding, has been discussed; the problem also arises when, for example, Medicaid or Medicare patients remain hospitalized only because suitable nursing home placements are unavailable. Similarly, short-run inefficiencies in hospital scheduling patterns, staffing ratios and communications procedures can add "unnecessary" days to a patient stay that are beyond the physician's control.

NOTES

1. See, for example, Larry Frederick, "How Much Unnecessary Surgery?" *Medical World News* (May 3, 1976), pp. 50-66; Bruce Stuart and Ronald Stockton, "Control Over the Utilization of Medical Services," *Milbank Memorial Fund Quarterly: Health and Society*, Vol. 51, No. 3 (Summer 1973), pp. 341-394; and Carl Slater and Alice Bryant, "Regulation of Professional Performance" in *Effects of Regulation in the Health Sector* (Denver: Policy Center, Inc., 1974).

2. E.G. McCarthy and G.W. Widmer, "Effects of Screening by Consultants on Recommended Effective Surgical Procedures," *New England Journal of Medicine* (December 19, 1974), pp. 1331-1335; and Statement by Eugene McCarthy in Subcommittee on Oversight and Investigations of the House Committee on Interstate and Foreign Commerce, 94th Congress, 1st Session, *Hearings on Getting Ready for National Health Insurance: Unnecessary Surgery* (1975), p. 133.
3. Subcommittee on Oversight and Investigations, *Hearings on Getting Ready*, p. 133.
4. See Ingelfinger, "Misuse of Information Printed in the Journal," (editorial) *New England Journal of Medicine*, Vol. 294 (March 18, 1976), p. 667; *New York Times*, February 6, 1976, p. 1, col. 1; and letter to Hon. John E. Moss, September 15, 1975, from Theodore Cooper, Assistant Secretary for Health, published in Subcommittee on Oversight and Investigations of the House Committee on Interstate and Foreign Commerce, 94th Congress, 2nd Session, *Report on Cost and Quality of Health Care: Unnecessary Surgery* (Subcommittee Print, 1976), pp. 45-46.
5. Subcommittee on Oversight and Investigations, *Report on Cost and Quality*, pp. 30-31.
6. Ibid, pp. 31-32.
7. Jane Brody, "Cornell Study Calls 11 Percent of Surgery Unnecessary," *New York Times;* May 3, 1975, p. 58c.
8. Subcommittee on Oversight and Investigations, *Report on Cost and Quality*, p. 30.
9. Wennberg, Subcommittee on Oversight and Investigations, *Hearings on Getting Ready*, p. 76.
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27. For example, the most common source of information detailing length of stay differences among hospitals is found in the CPHA Professional and Hospital Activities (PAS) reports. While the number of hospital days reported by PAS tends to be fairly reliable, there are indications that upwards of 40 percent of principal diagnoses records on hospital case abstracts (which form the basis for the PAS data system) may be incorrect for particular institutions, and that the average national error rate for principal diagnoses runs between 12 and 15 percent. Naturally, errors of this type will bias any cross-sectional estimates of length of stay differences by diagnostic category. See Gertman, "Hospital Length of Stay," p. 55.
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34. E. Brian, "Foundation for Medical Care Control of Hospital Utilization: CHAP—a PSRO Prototype," *New England Journal of Medicine*, Vol. 288 (April 26, 1973).
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36. Subcommittee on Oversight and Investigations, *Cost and Quality*, p. 32.
37. See discussion in Council on Wage and Price Stability, *Employee Health Care Benefits*, pp. 40300-40303.
38. Ibid, p. 31.
39. Donna Barbaro, Larry Shuman, and Robert Swinkola, "An Evaluation of Various Presurgical Testing Procedures," *Research Series*, No. 16, Blue Cross of Western Pennsylvania, January 1976, p. 6.

ERRATA: In the last *Journal*, The Urban Institute excerpt indicated that Texas had reduced its inpatient hospital coverage under Medicaid to 14 days. This is erroneous. Texas has always offered, and continues to offer 30 days of hospital coverage for Medicaid recipients. *Editor.*

RADAR

Home Health Care: Its Utilization, Costs, and Reimbursement

The Health Systems Agency of New York and the Visiting Nurse Service of New York (a voluntary, community-based home health agency) designed a two-year demonstration project to: 1. learn more about costs of, and reimbursement for, home health care; 2. learn about the patients who use home health services; and 3. learn about the amounts and kinds of services used. This study was funded by the New York City Regional Medical Program, a Federal program, which as one of the forerunners of the current Health Systems Agencies, has been phased out.

The project site was a section of the Northwest Bronx, an area containing a range of economic groups, and a higher than average old age population (19% over 65, compared with the New York City average of 12%.) All admissions to the program over a 15 month period, excluding those patients with incomplete periods of care, were included in the study group, creating a sample population of 420.

Population Characteristics: The mean age of those seeking home health care was 72, although ages ranged from 21 to 100. Nearly 80% of the patients were over 65, 50% were over 75, and 13% were over 85. Twice as many were women as were men. Approximately two-thirds of the patients lived with others; however, 40% of females lived alone, compared to 16% of males.

Heart conditions and malignant neoplasms were the most frequently reported diagnoses, 19% and 14% respectively. Diabetes, fractures, and CVAs (strokes) were the next three most frequently reported primary conditions. Many patients had physical impairments common to advancing age, such as problems with speech, hearing, or vision, but very few of those losses were uncorrectable.

Patients were evaluated, on admission and discharge, on their ability to perform 12 necessary activities of daily living. Some 9.7% needed assistance in walking, and 10.3 could not walk. Assistance in dressing was needed by 16.7%, while 15.5% could not dress. 14.7% could not use the toilet by themselves, and 38.8% could not bathe themselves. Patients were also classified into three general "physical function groups," depending on amount and degree of assistance needed. Those in Group I needed help only in performing household and marketing activities; Group II patients needed assistance with one or more activities of daily living, such as walking, dressing, or bathing. Patients in Group III were entirely dependent on another person for one or more of the activities of daily living. Group I included 39% of the patients, Group II, 28%, and Group III, 33%.

As expected, it was found that medical diagnosis is not a good indicator of the amount or type of care needed. Rather, the focus should be on specific services, which permits the definition of level and amount of care.

Average period of care for the study group was 52 days. Functional group appeared to be the single best indication of length of stay, with Group I patients averaging 46 days of care and Group III patients averaging 55. There was not a large variance in length of stay for any of the subgroups. Three-fourths of the patients had only one admission in a year's time, meaning that most required home health care for less than two months per year.*

Among discharges from the program, very few left to enter nursing homes. One-quarter of the patients were discharged on being admitted to an inpatient facility, but the majority of these were hospital admissions. Another 54% left because home health care was no longer needed. Other reasons for discharge included direct care by others, 7.1%, death, 4%, and other, 5.2%.

Services Used: All participants in the study received at least one nurse visit, as the study only looked at patients who had need for such care. The nurse also served as the focal point and coordinator for patient care, providing services that included health education of patients, monitoring vital signs, medical treatments, personal care activities, coordinating all health services and supervising paraprofessionals. The average number of nurse visits was 8.5 per period of care.

Nursing type care on the paraprofessional level is delivered by visit aides (home health aides who visit for limited periods of time) and placement aides (who perform fewer nursing duties, but stay with the patient longer periods of time.) Visit aide services were used by 10% of the population, averaging 17.3 visits per period of care.

In addition, two-thirds of all patients saw a physician, an average of 2.1 visits each.

Household and personal care is delivered by housekeepers, home attendants and placement aides. (This is in addition to some shopping, bathing, cooking, and laundry performed by visit aides.) Almost two-fifths of all patients needed household and personal care, an average of 314 hours of service.

Of the first admissions, 33% received physical therapy (1.8 visits each), 16% received social services (2.3 visits each), 30% had transportation services, 45% received equipment and supplies, 16% received laboratory services, and 8% received therapy of different types.

Cost and Sources of Payment: The average per diem cost of care for the study group was $14.71. Mean health care cost based on actual fees charged for service was $768 per case. The median, however, was $347 per case, indicating a large skew in the data. The top 10% of the study population, when ranked according to costs, incurred 47% of total costs, and the top 20% incurred 67% of total costs. The average cost for the population, excluding the top 10%, was $453. The average cost for this group alone was $3,744.

There are two major reasons that the top 10% had higher costs. First, their period of care was nearly three times the average. Second, they needed much more homemaker services than the rest of the population. However, per diem home health costs for this expensive group were $25.01, still less than per diem rates for Health Related Facilities[1] ($28) or Skilled Nursing Facilities ($45) located in the Bronx. Per diem rates by physical function group were $11 for Group I, $15 for Group II, and $20 for Group III.

To consider all cost factors in comparing home health costs with nursing home costs, it is necessary to include household expenses. The study used $12.47 as a daily living expense for an elderly person living alone, a "moderate" budget estimated by the Community Council of Greater New York.

Estimated Per Diem Costs

	Health Service Costs	Estimated Household Expenses	Total Cost
Average for Home Health Study Group	$14.71	$12.47	$27.18
Highest 10%	25.01	12.47	37.48
Remaining 90%	10.82	12.47	23.29
Health Related Facilities	28.00		28.00
Skilled Nursing Facilities	45.00		45.00

Average per diem costs for the second most expensive 10% of the population were $14.31, or *less than the average for the whole study group*. This means that for 90% of home health patients, costs are less than average cost for a similarly located Health Related Facility (HRF). For the most expensive 10%, medical costs are still less than for HRFs, and total costs less than SNF care.

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*(Editor's Note: If, as suspected, patients who enter nursing homes have a tendency to stay there, this short length of stay, coupled with the prevention of nursing home placement could result in considerable cost savings.)

[1] Health Related Facilities are New York State's Intermediate Care Facilities.

All cost barriers were removed during the project. All needed care was given, whether or not payment was available, with study funds paying all unreimbursable costs. It was feared that removing cost as a limiting factor would lead to overuse of services by recipients. However, no overutilization was noticed.

One-third of all care costs were not reimbursed by any third party source, although 96% of the patients had some type of third party coverage. 80% of the patients had Medicare (Title XVIII) coverage. However, Medicare only reimbursed 26% of all care costs. The major reason for this discrepancy, according to a Medicaid Bureau home health expert, is Medicare's restrictive level of care requirements. In order to receive home health care, patients must be in need of Skilled Nursing Care, as defined by Medicare. In addition, Medicare does not cover services provided by Housekeepers/Home Attendants.

29% of patients had Medicaid coverage (Title XIX.) Medicaid paid 34% of program costs.

Summary: The project demonstrated that it is possible for a home health agency to deliver a full complement of home health services, directly or through contract, offering a wide range of services at reasonable cost. However, a major barrier to providing home health care with the necessary range of service is the lack of full reimbursement. More flexible payment arrangements, especially for transportation, ancillary, housekeeping and attendant services are needed, as is relaxation of the hospitalization requirement as a prerequisite for home health care under Medicare.

The study concludes "*Care at home through a home health agency must be considered before all other alternatives; it is more practical and economically sounder to provide care at home, when feasible, than institutionalize a patient.*"

There are other reasons for keeping patients out of institutions beyond those of practicality and cost. Nursing homes, all too often, have a tendency to become warehouses for the old. Independence and dignity are important to a patient, and are preserved by being in one's own home. The home often is a better place for treatment, as surroundings are familiar, and in most cases, there is companionship from friends and family.

Analysis of the Federal Medical Assistance Percentage (FMAP) Formula

JWK International Corporation conducted this study to assess the adequacy and fairness of the current Federal Medical Assistance Percentage (FMAP) formula, at the request of the Medicaid Bureau. The current formula was found inequitable, and three improved formulas as well as implementation strategies for those formulas were proposed.

The current FMAP Formula has been in use since the inception of the Medicaid program in 1966, and has been used to determine AFDC matching percentages since 1967. However, for AFDC programs, States have the option of using the current formula or an earlier pre-1967 formula. Currently, seven States use the earlier formula.

The FMAP formula is based on the ratio of State per capita income to National per capita income, allowing for a higher match rate for States with low per capita incomes. The formula reads:

$$\text{Federal percentage} = 100 - .45 \times \frac{(\text{State per capita income})^2}{(\text{National per capita income})^2}$$

No State can be matched higher than 83% or lower than 50%.

This study was undertaken due to concern that the current formula is too heavily biased in favor of poorer States, and fails to take into account the heavy financial burden imposed on States with high service costs, or comprehensive AFDC or Medicaid programs. A formula was devised that evenly distributed "fiscal burden" for Medicaid and AFDC programs for each State, and a correlation was run between present and potential formulas and this ideal "even-burden formula." The relationship between the current matching percentages, and the best available estimates of program fiscal burden was found to be quite low.

The study indicates three factors to be considered in determining State FMAP equity: State's ability to pay for services; the need for services in that State; and the cost of those services. The current formula takes only the first of these factors, a State's ability to pay (as measured by per capita income) into account. Relative per capita income is highly correlated with both ability to pay and cost of services. By offering a lower match to those States with a high ability to pay, the FMAP discriminates against States where the cost of delivering services is higher. By squaring the "per capita income" in the formula, this discrimination becomes quite pronounced.

The current formula makes no allowance for relative program size between States. If two States are identical, but one offers services to twice as many individuals, it is still reimbursed at the same rate, even though program costs represent a much larger proportion of its budget.

Furthermore, the study found a positive correlation between the relative size of Medicaid and AFDC recipient populations and per capita income. The use of the inverse of per capita income as the determining FMAP factor thus works to the disadvantage of large, industrial States with proportionally larger Medicaid populations.

The study found the mathematical structure of the FMAP formula woefully inadequate. An ideal formula would spread matching rates evenly along a continuum, in proportion to fiscal burden. The current formula, by bunching 15 States at the 50% lower limit, reimburses at the same rate States with considerable differences in fiscal burden. As the current formula stands, all States with per capita income more than 5.4% higher than the National average receive the 50% match. Without the 50% floor, and using the present formula, the FMAP percentage would run as low as 16% (for D.C.), an indicator of the large spread in per capita income for those States at the 50% match.

Further analysis of the current FMAP uncovered the following statistically significant correlations:

1. States which offer more services to a larger number of recipients tend to receive a lower Federal share;
2. Size and growth of a State's program do not depend on the match rate;
3. Higher hospital and office visit costs correspond to higher State per capita income;
4. The lower the per capita income, the larger the percentage of population below the poverty line; and
5. The higher the per capita income, the larger the percentage of the poverty population receiving Medicaid.

As mentioned earlier, the first step toward developing a better matching formula was the design of an "even-burden formula," which took program unit costs, fiscal capacity, and program size (the number of recipients or eligibles) into account. Although this formula could not be used as a matching formula because of the unreliability (in terms of being subject to manipulation) or one time nature of the data elements, it was used as a bench mark against which prospective formulas could be measured.

No satisfactory cost index was identified for use in a new formula and therefore, this term was dropped from consideration for inclusion in a final formula. For the AFDC matching formula, the number of recipients was used as an estimator for the number of eligibles. For Medicaid, the eligible population was defined as the sum of the AFDC population, the SSI population, and the Medicaid non-cash recipient population.

The study identified a simple new formula, where legislators set minimum and maximum matching percentages. The formula then assures equal distribution over that total range. In generalized terms, the formula reads: $f_i = f_{min} + (f_{max} - f_{min})v_i$ where

f_i = FMAP for State i;

f_{min} = lowest matching percentage allowed (e.g., .5);

f_{max} = highest matching percentage allowed (e.g., .8);

v_i = equalizing factor for State i with minimum of 0 and maximum of 1.

Although there is no guarantee, most probably the 50% floor for matching percentages would be retained.

Of the three factors to include in a matching formula, the contractor's analysis indicates that only one, size of the eligible population, should be included in a new formula. Any such formula would have much higher correlation to the "even-burden formula" than the present FMAP formula, The analysis indicated that if no cost of services factor could be included, then the ability to pay factor had to be excluded also. The reason for this is that these two factors are correlated - i.e., high costs occur in States having a high ability to pay. If per capita income is included in the formula to represent ability to pay, then the States with high costs are heavily discriminated against because of differences in cost of service. Therefore, a formula must include either both of these factors, or neither.

In a new formula the v_i, or equalizing formula, should be based on the ratio of eligible population divided by total State population. This changes the spread of percentages so that the State with the lowest percentage of Medicaid recipients relative to population receives the lowest match and the State with the largest Medicaid population (in percentage) receives the highest match. Three possible formulas are recommended, based on Medicaid eligibles, Medicaid recipients, and AFDC recipients. If one formula is wanted for both the AFDC and Medicaid programs, then the AFDC formula could be used for both, as there is a good correlation between AFDC recipients and Medicaid eligibles, and there would be little loss of equity.

Since the mathematical structure of the alternative formulas does not "bunch" a number of States at the minimum level, all of the recommended formulas *may* result in an increase in Federal costs, ranging from $.9 to $2.7 billion. However, some States would receive a lower match under the new formulas. To alleviate this, and to possibly institute a maintenance of effort clause, under which no State's expenditures drop below the current level, the study lists several alternate implementation plans.

The Medicaid Bureau has recommended to Secretary Califano that a Departmental task force be formed to analyze the study and make recommendations concerning possible legislation.

Evaluation of Postpayment Screens Used by Medicare and Medicaid Fiscal Agents

One method available to the Health Care Financing Administration and to State Medicaid agencies to combat overpayments, fraud, and abuse is review of paid claims. Postpayment review is the basis of the Medicaid Management Information System (MMIS) Surveillance and Utilization Review (SUR) subsystem, and in one form or another, is used by Medicare Part B carriers. This JWK International Corporation study compares the postpayment screens used by contractors—carriers of Part B for Medicare and fiscal agents for State Medicaid agencies, and tries to determine how effectively the systems are working, and what similar standards exist between the two programs.

The study involved visits to nine States (South Carolina, Pennsylvania, Tennessee, Colorado, Iowa, Indiana, Oklahoma, Vermont, and New Hampshire), where discussions were held with contractor and State staff responsible for postpayment review. Representatives from the carrier and fiscal agent were asked questions about the types of screens in use, and benefits derived, in the forms of recovery, punitive action, or deterrance. However, a major problem was that the data needed for the study was not consistently maintained or available.

The postpayment screening systems in the nine States visited derive from one of four basic sources: 1) the SUR subsystem of MMIS (Medicaid); 2) the Part B Postpayment Utilization Control System (Medicare Part B); 3) the National Association of Blue Shield Plans Post UR System; and 4) Electronic Data Systems, Federal Corporation's Advanced Medicare System.

The study does not discuss the relative merits of the different systems. Also, in four of the nine States (South Carolina, Tennessee, Colorado, and Iowa), the postpayment screening function for Medicaid has been taken over by the State.

All the postpayment systems have several features in common. All review patterns of provider practice, rather than individual claims. Providers are selected for further review through an exception process. Guidelines or parameters are set up, and providers whose pattern of practice, as reflected by their billings, falls outside the guidelines, are excepted for further review.

The contractor found all provider billing records are sorted for exception by one of a set of nine variables: 1) number of patients seen;

2) total dollars charged; 3) dollars charged per patient; 4) total dollars allowed; 5) dollars allowed per patient; 6) total number of services or procedures performed; 7) number of services or procedures performed per patient; 8) percent of patients who received a given service (or procedure); and 9) percent of patients treated (or seen) for a given diagnosis.

Methods of sorting or comparing provider practices fall into the following categories:

> *By ranking* — All providers in a given peer group are ranked with respect to the variable of interest. The top N providers are then flagged for further consideration.
>
> *By comparison against a predetermined threshhold* — All providers with a variable exceeding some arbitrary limit (i.e., earned more than $100,000 or performed more than 75 tonsillectomies) are flagged.
>
> *By comparison against a computed threshhold* — Providers are flagged if the variable of interest exceeds the mean + K standard deviations, Y percent of the mean, or the P*th* percentile.

The major difficulty encountered during the study, especially for Medicaid programs, was that sufficient information was not available on effectiveness of postpayment review. For example, no data were being kept to determine which screens were most effective in uncovering overpayments. The study also found there wasn't good feedback to postpayment screening units from other units on the amounts of overpayments recovered, or on the results of fraud cases initiated.

One area in which JWK found postpayment review effective was in singling out physicians suspected of aberrant practices, for a "Watch-Doctor" list. Claims for these physicians are automatically suspended at intake for review, resulting in reduction or denials of charges which might otherwise have passed the usual screens. In Indiana, for example, tightened prepayment surveillance for these doctors saves about $25,000 each for Medicaid and Medicare each year.

Study Conclusions: By and large, personnel assigned to the postpayment review process do not fully understand the screening mechanisms employed, the contractor found. Column headings and line items are misinterpreted; often faulty explanations were offered on how peer group averages and threshholds were calculated. When users don't understand the system, decision parameters that should be changed go unchanged, meaningless statistical comparisons are made, and reams of computer printouts are used to less than full advantage.

JWK found that systems documentation, written by software specialists, is usually incomprehensible to those using the system. This is perhaps the greatest barrier to a fuller understanding of a system by its users. Partly as a result of lack of understanding, the screening systems are not being used optimally: they are being used to produce names, rather than to screen. A screening system should automatically identify the most aberrant providers, with few false alarms. Currently, postpayment screens are supplying computer produced information, which is then eyeballed to eliminate cases clearly not worth pursuing, and to reduce the caseload to a size the available staff can handle. A good system should automatically identify the cases which would be most productively investigated, and should come up with a list of suspect providers of usable size.

The contractor believes no one method of computing threshholds (exception limits) is necessarily "better" than another. However, it did find problems with the mean + K standard deviations method of threshhold setting. This method assumes that provider practices follow an approximately normal distribution. The study found case after case disproving this assumption. (This reinforces past findings of Medicaid Bureau staff.)

JWK recommends threshholds be set after prior examination of frequency distributions or histograms to obtain a "feel" for the data. This allows the reviewer to apply threshholds which can be justified, rather than arbitrary ones. The study recommends all computerized screening systems have a capacity to produce such distributions.

The statistics are too technical for inclusion here, but in setting threshholds, it should be recognized that caseload size affects the size of the standard deviation, in that physicians whose caseloads are larger are more likely to conform to mean, than those whose caseloads are small. Failure to recognize this leads to mis-weighting of exception criteria, both in cases where the limit is some percentage of the mean (say 200%) or some number of standard deviations, when these limits are calculated using Statewide averages as a data base. In essence, providers with larger caseloads should be judged more severely, or have a lower threshhold, than those with small caseloads. The larger the caseload, the smaller is the standard deviation as a percentage of that caseload. (Statistical calculations are available on request to the Institute for Medicaid Management.)

If as JWK suggests, sample size is used as a factor in determining significance, instead of examining claims for one quarter only, data should be integrated over time, so that data are for the latest four quarters combined. This larger sample size increases precision (and decreases the standard deviation) with the square root of sample size.

By combining surgical procedures into a single category for weighting, abuse or fraud associated with one surgical procedure is undetected. Using the flexibility of existing systems, different groupings of procedures should be tried to discover potential abuse.

The contractor expanded the study to gather data on prepayment screens, especially those dealing with concurrent procedures and medical necessity. Data gathered indicate that, as far as direct cost savings are concerned, prepayment screens are more effective than postpayment screens, with savings from disallowed claims paying for part or all of data processing costs.

Using the prepayment screening system of the Medicare Part B Model System, Blue Cross/Blue Shield of South Carolina experienced considerable success using edits that employed prior claims history. $284,000 was saved for Medicare for the period June-November, 1977, for a cost saving of 48¢ per claim; $256,000 was saved for Medicaid for the period January-November, 1977, for a saving of 47¢ per claim. For FY 1977, postpayment review identified $74,000 in overpayments for Medicare and $102,000 for Medicaid.

As Pennsylvania Medicaid didn't have an automated claims processing system, no data are available. For Medicare in Pennsylvania, cost savings due to screening using history edits was $3,728,000 or 71¢ per claim. Approximately $350,000 was recouped (recovery agreements were reached) through postpayment reviews in Calendar Year 1976.

In Colorado, Blue Cross/Blue Shield saved $1,287,000 for Medicare by the use of history-related screens, for a saving of 99¢ per claim. Again, no comparable figure is available for Medicaid, and although saving through claims denials was considerable, it wasn't sorted by type of edit. Postpayment utilization review denied payments totaling $50,000 for Medicare and $765 for Medicaid. All data are for Calendar Year 1977.

These sample States indicate, first, that in terms of direct cost savings, prepayment review is more effective than any type of postpayment screening. For Medicaid particularly, based on JWK's findings, postpayment review in many States is in disarray.

Many of the problems, either with the lack of postpayment screening systems, or with the lack of data in the form needed to evaluate screening, can be solved by installing an MMIS. As a matter of fact, five of the nine States surveyed were implementing MMIS.

Furthermore, as indicated by the study, postpayment screening in Medicaid is still being developed, and many States lack the resources or expertise to run an effective system.

Benefits from postpayment screening occur in four areas: detecting overpayment; fraud and abuse detection; tightened surveillance; and deterrance. However, before an answer can be given to whether such systems are effective, two things need to happen: better data need to be collected, and postpayment review systems need to be operated so that full system benefits are derived. And in Medicaid at least, States currently without postpayment review systems need to implement MMIS.

Review of States' Opinions of MMIS (Medicaid Management Information System)

The Medicaid Bureau (MMB) asked Joseph L. Davis, Consultants, Inc. and Control Analysis Corporation to undertake this study to provide a better understanding of State opinions of the MMIS and to thereby improve MMIS implementation.

During a 13 week period, 27 States were interviewed, 12 of which had an operational MMIS. In addition, a comprehensive questionnaire was completed by the interviewed States.

As 49 out of 53 jurisdictions have implemented, or are planning to implement MMIS, the concept of MMIS as the key system for State Medicaid administration appears to be a sound one. This conclusion is further supported by the opinion of the States that most MMIS objectives were being met, or would be met following installation. These include:

- Prevention of erroneous payments;
- Reduction of overutilization, fraud, and abuse;
- Better and more timely management and information;
- Improvements in provider attitudes and participation.

Since practically all States have decided in favor of MMIS, the objective becomes one of speeding up implementation. System installation is a difficult task for even the best equipped States. Implementation requires user cooperation, technical staff resources, computer hardware support, and time to progress from one stage to the next. Because of the difficulties and also because of the risks and hazards involved, State officials tend not to move hastily, unless they have a high degree of confidence in what they are doing.

In the past, delay occurred because States perceived a high degree of uncertainty regarding MMIS certification. This uncertainty arose because certification guidelines have never been published, and for other reasons, the contractor found.

In order to counteract the uncertainties and bureaucratic hedging attendant to such a large project, and marshall the resources needed, MMIS requires strong leadership and support from within the State - someone who can commit resources to assure successful implementation and who can sell MMIS to the legislature. The study found that States with successful implementation showed this type of leadership, while States in which MMIS was moving slowly usually lacked determined leadership and commitment. Without strong leadership, the study concludes, a number of States will continue to drift slowly toward MMIS, rather than push to project through.

A communication problem also has caused difficulties in MMIS implementation. The model system of the General System Design (GSD) was intended to serve as a guide to States. Because of its inclusion alongside the MMIS functional specifications, the GSD has been perceived by a number of States to be the basis for MMIS certification. As a result, States have been copying the model system, or the system of an already certified State to increase their own chances of certification, even if that meant including MMIS modules that were never used.

Each State, of course, has its own set of problems which delayed implementation. However, one common problem shared by many States is the inability to recruit qualified staff for two reasons - unwillingness of the legislature to authorize staff positions and noncompetitive salaries.

The study lists improvements that could be made to the Federal MMIS effort. The major

TABLE 1

Factors Leading to Decision to Implement MMIS (Operational and Non-operational States) 25 States

	Major Impact	Minor Impact	No Impact	No Response
1. Federal financial incentives	17	5	1	2
2. Lack of management information	13	6	4	2
3. Lack of control over erroneous payments	12	4	7	2
4. Lack of information for fraud and abuse efforts	11	10	2	2
5. Long payment cycles	7	8	8	2
6. Lack of flexibility	6	11	6	2
7. Budget overruns	2	9	12	2
8. Feedback from other MMIS States	1	16	6	2
9. Pressure from providers	1	8	14	2

difficulties appear to be in the area of the approval process and certification. There is overwhelming opinion among the State that HCFA needs to provide more guidance on the certifiability of State systems, and that certification criteria should be published. In addition, MMB should advise the States throughout their planning and design phases as to the certifiability of their system. (There is unanimous opinion that such guidance should be given.)

States also felt there were areas in which the GSD needed improvement: new modules should be added to the system to cover such areas as long term care, EPSDT tracking, and on-line eligibility; States should be given more flexibility with MARS and SURS reports; and the GSD should contain more examples of certifiable options (such as data base management MARS reports.) Small States should be able to install a simpler version of SURS. In addition, the GSD should include more detail on controlling erroneous payments, such as a checklist of possible edits.

Some of the recommendations of the report are:

1. the GSD should be revised and split into two separate documents: a document containing functional specifications for MMIS, and a technical assistance document containing samples of model certifiable systems;
2. the Medicaid Bureau should provide technical assistance and improve coordination to help overcome problems in the area of Medicaid/Medicare information and data exchange;
3. the MMB should identify barriers to timely MMIS implementation in each State and should then facilitate technical assistance appropriate to that State's barriers. Technical assistance should be improved and expanded in other ways as well, with MMB acting as a clearinghouse for existing State capabilities.
4. MMB should consider certification of State systems in phases.

In summary, the study recommends that the Medicaid Bureau concentrate on clarifying and possibly streamlining the approval process, providing more flexibility in the kinds of modules which can be certified, and improving technical assistance through State-to-State interchanges.

Three Year Study on the Assessment of EPSDT Practices and Cost

The 1967 Social Security amendments required all States with Medicaid programs to provide Early and Periodic Screening, Diagnosis and Treatment (EPSDT) services to Medicaid eligible children under 21 years of age. HEW implementing regulations required all such children to be screened, effective July, 1973; by 1975, over 10 million children were eligible for the program. At HEW's request, Applied Management Sciences (AMS) conducted a three year study to assess the impact of the program on State Medicaid budgets, with the final report - Assessment of EPSDT Practices and Costs - submitted to HCFA in March, 1978.

To determine if the EPSDT program affected cost and utilization of Medicaid services, AMS analyzed data on two States, comparing pre- and post-screening years (1974 and 1976) with the year screening took place (1975). Experimental and control groups were chosen randomly from two pre-existing groups—children screened in the spring of 1975 and children not screened as of February, 1976. Using this design, the difference in the periods before and after screening was measured to determine changes in utilization and cost. Variables such as age, race and geographical location, which would affect costs and utilization of services, were stratified in the design. Age/race groups were defined as white and nonwhite, aged 0-6 and 7-21. The two chosen test locations were a relatively rural southern State (State 1) and an urban-industrial northeastern State (State 2).

To develop a study sample for 1974-1976, identification numbers for Medicaid eligible children in each State were obtained from 1975 eligibility files. Applied Management Sciences then randomly selected eligible children who were screened or not screened from lists of ADP (Automated Data Processing) files supplied by each State. For each State, 1600 persons were sampled, with a 10 percent oversample for 1975 data. The oversampling proved sufficient to ensure a comparable sample population in both the experimental (screened) and control (unscreened) groups over the three year study period. Data on children identified for the 1975 screening year were collected for the pre- and post-screening years. Information on ten Medicaid services categories (physician office visits, pharmaceutical prescriptions, dental procedures, outpatient hospital visits, physician other visits, inpatient hospital days, physician emergency visits, optical service visits, and other service units) were manually abstracted from paid claims histories and analyzed.

While AMS cautioned that the long-term benefits of the EPSDT program cannot be accurately predicted on the basis of one three-year study, they made the following major findings:

1. In general, cost and utilization of services by both screened and unscreened children throughout the study period were higher in the urban-industrial northeastern State than in the rural southern State. For example, the range of annual per capita service utilization* between 1974 and 1976 in the urban State was 10 to 15 service units per child as opposed to 5.8 to 9.3 service units in the rural State. Costs in both States followed a similar pattern: the urban State costs ranged from $146 to $243 annually from 1974 to 1976 while the rural State averaged from $85 to $129 during the same period. The likelihood of more accessibility to providers in the urban State would partially explain its higher usage and cost.
2. In both States, costs as well as screened children's utilization of services greatly increased from 1974, the pre-screening year, to 1975, the year of screening. Utilization in 1975 increased 42% over 1974 in State 1 and 32% during the same period in State 2. Similarly, expenditures increased by 79% in the rural State and 35% in the urban State from 1974 to 1975.
3. Utilization and costs were higher by 55% and 7%, for screened than unscreened children, respectively, in the rural State during 1975. In contrast, screened children used services 18% less than unscreened, with a 9% lower cost, in 1976. The 1975 screenings identified medical problems which caused high utilization of services. In 1976, because problems had been diagnosed and treated in the previous year, fewer children were treated.
4. In the urban State, the increase in utilization from 1974 to 1976 was 11% higher for EPSDT children than for non-EPSDT children.
5. During the post-screening year, the utilization level in the urban State remained unchanged, while costs increased by 10% over those of 1975.
6. Utilization and cost figures for screened children were higher in 1976 than in 1974 in both States. In State 1, the increases were 29% in utilization and 38% in per capita cost; in State 2 the increases were 32% and 48%, respectively.
7. The gap between screened and unscreened children's annual service usage narrowed over the three year period in both States (in State 1 from 2.2 in 1974 to 1.7 service units in 1976; in State 2 from 2 in 1974 to 1.3 service units in 1976.) The difference in cost of services between screened and unscreened groups was also reduced from $30 in 1974 to $12 in 1976 in State 1, and from $50 to $27 in 1976 in State 2.

The study concludes that since EPSDT children had lower utilization and expenditure levels than non-EPSDT recipients in the pre-screening year (1974), children who received screening rarely used medical services in the past. The results of the survey indicate, at least in the short run, that the EPSDT program had been successful as a mechanism for raising the level of care among those who rarely use medical services.

The study's figures indicate that EPSDT has increased annual use of medical services 12% in State 1 and 9% in State 2. On the other hand, EPSDT has not been shown to produce any short run cost savings in these two States. Annual expenditures for medical services by the EPSDT sample increased by 22 percent in State 1 and 19 percent in State 2. This is not a surprising finding, since more children are receiving health care under the program. It is the long range purpose of EPSDT to provide quality health care to children so that their chances of an independent and healthy adulthood are increased, with the likelihood of costly health problems diminished in the future.

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*Utilization is counted in service units, such as visits, days, prescriptions, etc.

AMS concludes that the cost of providing health services to EPSDT children is apparently not much different than the cost of providing routine health services to the Medicaid population at large. Although as indicated, the long-term effect of EPSDT cannot yet be measured, this study is the first attempt to evaluate the program.

EPSDT Best Practices: While AMS was conducting its three year analysis of the EPSDT program, they released as part of the major study, an "EPSDT Best Practices Report" (July, 1976). The report is a result of AMS visits to 18 sites in six States to assess EPSDT screening and case management practices. The primary objectives of the assessment were (1) to determine whether screening and case management methods affected the success of the program, and (2) to find the most efficient and effective approaches to screening and case management.

The methodology used to develop the Best Practices Report first defined screening as the performance of a basic health evaluation to determine whether the child needs further diagnosis and/or treatment. Case management was defined as monitoring to assure those children in need of care are referred for diagnosis and treatment. In addition, case management included maintenance of an individual health record for each child in the system, and a current data file for use in analysis of the costs and benefits of the EPSDT program.

Three specific criteria were developed to identify the screening and case management which were "best practices": feasibility, timeliness and cost effectiveness. Could the approach in question be implemented relatively quickly within the organizational structure which existed in the majority of sites visited, at a reasonably low cost? To assure systematic and accurate collection of data for analysis, an interview guide consisting of 174 questions in seven major categories was developed: background information; case findings; screening; case management; staffing; training; and data management and use. Six States were chosen on the basis of their interest in the study, the availability of EPSDT information, type of EPSDT provider system, number of eligible persons contacted or screened, and regional location. All States were located east of the Mississippi and had programs in effect at least one year prior to the time of the site visit. Each State agency selected three "best practice" sites within its environs on the basis of information supplied by AMS. In January and February, 1976, AMS surveyed the 18 local EPSDT sites using the interview guide.

The results of the study showed that the "best practices" to provide EPSDT screening and case management would include the following steps:

1. The local provider would furnish a broad range of health services including, but not limited to, outreach, screening, and case management.
2. The State Medicaid agency would send a printout of Medicaid eligibles under 21 years of age, with addresses, and date of last screening, to the provider via the local social service agency every month.
3. The local screening provider, using local residents full-time, would perform outreach, with a systematic plan to reach the entire eligible (EPSDT) population over a three year cycle.
4. The local provider would schedule screenings at varied times (e.g., morning, afternoon, evening, weekend) with 12 to 14 screenings per session (three to four screenings per hour).
5. The local provider would utilize extensive test procedures including vital signs, growth assessment, vision, hearing and dental inspection, nutritional and developmental assessment, unclothed physical exam, health history, and immunization status with the use of optional tests according to age, race, sex, and geographic location. Health aides would perform tests, except that the physical exam, evaluation of findings, counseling and education of the client would be done by the nurse practitioner. Three attempts would be made to reschedule missed appointments.
6. The local screening provider would perform case management activities, including scheduling and confirming the refer-

ral appointment; transportation; and establishing followup on the results of appointments and those who did not keep referral appointments.

7. The local provider would staff outreach, screening, and case management activities, with a team consisting of two outreach workers, one clerk/secretary, two health aides, one nurse practitioner, and a physician consultant with a total direct labor cost for all screening activities ranging from $16.00 to $19.00 per child.
8. The local provider would develop an orientation program for new screening staff, conduct inservice programs, prepare procedure manuals, and hold staff meetings for all personnel, with a specific six-week on-the-job training program for all non-professional staff.
9. The local provider would maintain a "problem-oriented" medical record for each child screened, containing all information available on the child.
10. The local provider would establish an efficient network for rapid exchange of information between the State Medicaid agency, the social service agency, the screening provider, and the providers of diagnosis and treatment services.

As AMS indicates, the "best practice" procedure described is a model which must be adapted to fit circumstances in various EPSDT environments. The entire "best practice" is comprised of exemplary State activities performed in different localities.

AMS concludes from the evaluation of screening and case management methods at each site that although conditions discovered and the validity of the findings were not related to any particular method of screening, the method did have an impact on the cost per screen and the capacity of the screening system. The study further concludes that there was no relationship between a particular case management approach and conditions treated, or subsequent participation of EPSDT children in comprehensive care programs. However, the method of case management utilized did have an impact on the rate of children treated and the cost of case management activities.

State Deinstitutionalization Study

With the passage of significant legislation in 1963,[1] the appropriate care and treatment of the mentally disabled became a national goal, aimed at upgrading community services for these persons. Because of this legislation and several later court cases regarding the right to treatment, many mentally disabled persons were discharged with the expectation that services provided in the community would be more appropriate, available, and equal in quality to the services provided in institutions. Advances in treatment and enlightened attitudes toward the mentally disabled had earlier contributed to a decline in institutional populations.

This study, completed in February 1978, was conducted by the Office of Research, Planning and Research Division of the Washington State Department of Social and Health Services, under an HEW contract. The study examined deinstitutionalization in Washington and Idaho to measure service availability to individuals discharged from State institutions for the mentally disabled. Data on institutional discharge planning, establishing contact between clients and community providers at discharge, and community services delivery to former patients were evaluated to determine the adequacy of each State's methods, and coordination of the system by Federal and State governments.

Seven substudies, each collecting information from a different source and employing a different questionnaire and methodology, were conducted. Through institutional medical records, the level and type of discharge planning occurring in State institutions were investigated. Records of 670 persons discharged from mental hospitals during FY 1976 (390 in Washington released to ten sample counties, and 280 in Idaho released all over the State) were reviewed. In addition, records of 96 mentally retarded persons released to 10 sample counties in Washington during FY 1976 and 38 mentally retarded persons released in Idaho in FY 1976 and the first half of FY 1977 were studied.

Interviews with 118 staff at all levels in mental hospitals and schools for the retarded were used to evaluate the discharge process. In an effort to determine the extent and type of community services received since discharge, researchers interviewed 230 mentally ill individuals in Washington and 172 in Idaho, as well as 88 mentally retarded persons in Washington and 37 in Idaho. Administrators of provider agencies (community mental health centers, adult and child developmental centers, sheltered workshops and homes, skilled nursing and intermediate care facilities, structured residential and group homes) were surveyed to investigate the degree of contact between State institutions and community service agencies, community services availability and accessibility, and agency problems. Federal and State legislation, policy and plans were examined for their impact on deinstitutionalization. Researchers contacted 93 program managers, planners, administrators, community providers and citizen group representatives for their assessment of the impact of Federal and State legislation and administrative structure on deinstitutionalization. Financial data were collected to compare funding of services in institutions and the community.

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[1] The Maternal and Child Health and Mental Retardation Planning Amendments and Mental Retardation and Community Mental Health Construction Acts.

The researchers were impressed by the finding that 91% of former State hospital patients in Washington and 88% in Idaho reported that they received one or more outpatient mental health services some time during 17 months or so between discharge and interview. Former State hospital patients 65 years and older and patients in Washington nursing care facilities, however, received fewer mental health services despite their residence in health care settings. At the time of interview, the majority of former State hospital patients (60% in Washington and 75% in Idaho) were living independently, in an apartment or hotel/motel. About 14% of those in Washington and 5% in Idaho had returned to the hospital by the time of the interview.

The study found that in both States less than one-fifth of the persons interviewed reported obtaining vocational evaluation, placement, training, or sheltered employment services. Only 13% in Washington and 35% in Idaho were employed part or full time.

The researchers believe that the study's most significant finding with respect to the mentally retarded was that 89% of the former State school residents in Idaho and 76% in Washington obtained either training in independent living and survival, basic academic and vocational skills, sheltered employment, and/or recreational services. As with former State hospital patients, few former State school residents receive social services.

In Idaho, the majority of discharged mentally retarded persons were living in shelter homes (54%) while in Washington most were residing in congregate care facilities (37%), group homes (13%) and licensed boarding homes (14%). In both States, approximately 23% of the retarded persons were in nursing homes and 12% were living in non-structured homes. As with the mentally ill discharged to nursing homes, those mentally retarded individuals in nursing homes received significantly fewer services. Similarly, the most common source of income for both the mentally ill and retarded in Washington was Supplemental Security Income (SSI).

Among problems described by facility administrators was the lack of interagency coordination of service delivery to those mentally disabled clients with multiple service needs. Some 37% of the administrators stated that lack of adequate funds and staff constituted their major problem, coupled with red tape and difficulties in obtaining prompt and adequate reimbursement from Federal, State and county sources. They also expressed concern about lack of vocational services and low availability of mental health services.

According to the study, timely discharge is delayed by a lack of appropriate settings (SNFs, ICFs, congregate care facilities, shelter or group homes). More than half of the mentally retarded persons in Washington wait at least two months for actual discharge. About half of the State hospital patients wait nearly a month for actual discharge. The length of time it takes to process SSI applications, especially for the mentally ill, was cited as another cause of delayed discharge.

While the discharged mentally retarded almost always went to live in the setting to which they were referred, one-third of Washington's mentally ill patients referred to nursing homes and congregate care facilities went to live in another type of residential setting.

Although deinstitutionalization of the mentally disabled is a Federal goal, the study found that there is no overall legislative plan to accomplish the as yet undefined objectives of the process. Additionally, financing care for the mentally disabled is a complex process involving 15 or more sources of income which is paid in 20 or more different ways, according to this study. The complexity of the funding system as well as restrictive eligibility requirements inhibit clients from obtaining needed services, the study concludes.

Recommendations directed at HEW, Washington and Idaho, and local provider agencies include: greater outreach efforts by direct mental health treatment providers; increased resources for and involvement of community providers in discharge planning; establishment of a single Federal agency to coordinate State and Federal deinstitutionalization efforts; and HEW development of a consistent set of Federal goals, guidelines, and responsibilities for providing services to the discharged mentally disabled.

annotated bibliography

Rabin, David L., Bush, Patricia J. and Fuller, Norma A., "Drug Prescription Rates Before and After Enrollment of a Medicaid Population in an HMO," *Public Health Reports*, Vol. 93:1, Jan.-Feb. 1978. Pages 16-23.

In 1971, Washington, D.C. enrolled 1000 Medicaid eligibles in Group Health Association, Inc. (GHA), an established HMO, to examine the effects of HMO enrollment on drug use. Data on prescriptions were examined for two years prior to and two years after enrollment. Some 22 months after enrollment, the prescription rate was 18% less than before enrollment, dropping from 2.9 to 2.4 prescription per enrollee per year. Prescription use in the two years before enrollment had climbed from 2.9 to 3.6 prescriptions per year. After enrollment, it remained stablized at the lower level.

The study found significant correlation between number of physician visits and number of prescriptions. Concurrent with the 18% decline in the prescription rate was a 15% decline in physician visits. Furthermore, the average number of prescriptions per physician visit dropped from .74 to .63 after enrollment. There was a decrease in rates and costs for the study group, but no indication of better quality of care, according to the measures used. However, the study population was satisfied with GHA service, as only 2.5% dropped out of GHA during the course of the project due to dissatisfaction with the delivery of services.

Courrier, Richard, M.A., "Is Early and Periodic Screening, Diagnosis and Treatment (EPSDT) Worthwhile?" *Public Health Reports*, Vol. 92:6, Nov.-Dec. 1977. Pages 527-536.

The author examines potential benefits of EPSDT, through an analysis of the program, and examination of data. In Sweden, in 1971, a program to screen all four year olds found health problems of functional importance in 21.6% of the children, showing that screening does find problems. Of the problems found, 71.8% were newly discovered. Data from U.S. sources is reviewed to locate areas where screening should detect problems. For example, 2-3% of children have sizable hearing losses. This is the type of problem where early detection through screening is important.

A cost-benefit analysis conducted by University of Texas Health Services Center, using conservative cost estimates, found that over 20 years, an effective nationwide EPSDT program would save $34.4 billion in 1971 dollars, after direct costs of $5.4 billion. The two major areas of saving are reduced mortality, $37.4 billion, and reduced hospitalization, $1.6 billion.

An analysis of data from Michigan's EPSDT program found that 62% of children receiving initial screens during a six month period were referred, while only 49% of those rescreened were referred. The 13% drop in the referral rate indicates problems are being found and corrected.

Kane, Robert L., and Kane, Rosalie A., "Care of the Aged: Old Problems in Need of New Solutions," *Science*, Vol. 200, No. 4344, May 26, 1978. Pages 913-919.

This article is a good survey of problems faced by our system of services and care to the aged. The authors believe many care components need to be available: sheltered living arrangements; home health and housekeeper services that include preventive care; day hospitals and health centers; and non-medically oriented old-age homes. These are in addition to the medically oriented nursing homes of our present system, which unfortunately often are the only type of care available.

The authors suggest that care for the elderly in general, and old-age homes specifically, need to be approached from a social service, rather than a medical standpoint. Medical services, of course, are needed, but are just one of a range necessary to raise the quality of life for the aged. Also, nursing homes must not remain veiled from public view. Rather, they and the community should be involved with one another, as community involvement causes standards of care to rise. The present fee-for-service, or cost reimbursement system, where benefit comes from keeping the patient ill, is labelled "perverse." Instead, payment differentials should be established based on quality of care, where successful patient outcomes, as compared with expected outcomes, are rewarded.

In examining care systems world-wide, certain problems seem to occur, even in countries with well developed long term care systems. Accelerating costs strain the budget; problems exist with coordination between health and social service components; staff is difficult to obtain in rural areas; and there is a lack of data on the cost-effectiveness of different programs.

"NYC Contracts With HMO to Supply Medicaid Services, Including Rx's, to 100,000," *American Druggist,* Vol. 177:3, March 1978. Pages 13-14.

The Health Insurance Plan of Greater New York (HIP) has been authorized to enroll up to 100,000 AFDC recipients, in an effort to control costs. Under the contract, the NYC Department of Social Services will pay HIP $25.33 per child and $49.23 per adult to cover all Medicaid services. As part of the program, HIP has selected 48 retail pharmacies (out of New York's 1500) to fill prescriptions for those Medicaid recipients enrolled in HIP. These pharmacies were chosen on the basis of proximity to concentrations of Medicaid families. Reimbursement will be based on average wholesale price plus a $2.00 fee per prescription.

"U.S. Funds Study of Capitation Payment for Rx's," *American Druggist,* Vol. 177:5, May 1977. Page 6.

In an Iowa demonstration project to be funded by HEW, Medicaid prescriptions will be reimbursed on a capitation, or fixed fee per patient, basis. The two-year study will test the capitation concept in two counties, with two other counties acting as controls. In the test counties, each participating pharmacy will receive a lump sum at the beginning of each month for each Medicaid patient who agrees to patronize only that specific pharmacy during that month.

At the outset, capitation rates per month will be $2.50 - 3.00 per AFDC recipient, $13 - 15 per SSI recipient, and $30 per nursing home patient. Adjustments will then be made based on utilization experience. Capitation gives the pharmacist an incentive to hold costs down by working with the physician to substitute generics or find over-the-counter drugs which can effectively replace prescriptions. In addition, both claims processing and reimbursement delay is eliminated. Administrative costs are lowered for both the druggist and the State. Patient monitoring becomes easier, as patient drug records (for a month) are located in a single pharmacy.

"Third Party Rx Ratio Drops for First Time," *American Druggist,* Vol. 177:5, May 1978. Page 10.

Pharmacies filled 2.0% fewer Medicaid prescriptions in 1977 than in 1976, as the number dropped from 205 million to 201 million. Total (National) Rx's increased 1.0%. In addition, dissatisfaction of independent pharmacists with Medicaid was reflected in a marked shift of Medicaid business from independent stores to chain stores. Rx's filled by independent stores dropped by 1.1% in 1976 and 3.6% in 1977. Over the same years, chain stores filled 8.3% and 6.6% more prescriptions, respectively.

According to the article, chains showed less hostility toward Medicaid last year than independents. In State after State, independent pharmacy operators, fed up with what they consider inadequate dispensing fees and cost reimbursement, and undue payment delay, either discouraged Medicaid business or gave it up entirely. Chains, however, did not show a similar attitude, and in some cases, welcomed the extra business.

Independents currently control approximately three-fourths of the prescription market. Statistics also show a general shift of Rx business from independents to chains, but this shift doesn't account for the decline in total Medicaid prescriptions, or the marked decline in Medicaid business handled by independents.

Plant, Janet, "Various Approaches Proposed to Assess Quality in Long-Term Care," *Hospitals*, Vol. 51:17, September 1, 1977. Pages 93-98.

This article surveys methods of nursing home patient evaluation that attempt to measure quality of patient care. Past Federal and State nursing home evaluation (according to this article) invariably focused on the facility itself, or, when there was Federal involvement and interest, on level of care. The author believes a good survey instrument for the evaluation of quality of patient care must focus on the patient. It will serve evaluators, patients and providers alike, and, hopefully, will disturb the patient as little as possible.

The article then describes available survey methods. The PACE (Patient Appraisal and Care Evaluation), developed by HEW, measures achievement of time-limited goals, or patient outcomes (whether therapy is achieving results in specific, limited areas). Emphasis is placed on medical and functional needs. The basic elements of the more comprehensive JCAH method include a patient history and assessment, master problem list, patient care plan, and goal achievement analysis. On the other hand, the Quality Evaluation System (QES) developed by Rush-Presbyterian St. Lukes Medical Center and Medicus Systems Corp., focuses on care processes and structure rather than outcome. Two patient-questionnaire methods are evaluated as well.

Brooks, Charles H., and Hoffman, John A., "Type of Ownership and Medicaid Use of Nursing Home Beds," *Journal of Community Health*, Vol. 3:3, Spring, 1978. Pages 236-44.

Study of 7,139 Title XIX-certified beds in 90 long term care facilities in the Cleveland metropolitan area reveals that there is a relationship betweeen the type of ownership (profit vs. nonprofit) and the number of Medicaid patients in intermediate care nursing homes. The Ohio reimbursement rate for ICF beds is closer to the actual cost of care than the rate for SNF beds.

The authors found that, although there was little difference between Medicaid patient use of skilled care beds in profit and nonprofit homes, proprietary home had a significantly higher number of Medicaid patients in intermediate care beds than did the nonprofit homes—71% vs. 57%, respectively. This finding suggests that the higher the proportion of certified ICF beds in an area, the greater the likelihood that more Medicaid patients will be located in proprietary nursing homes.

"Derzon Challenges GAO Home Health Cost Findings," *Modern Health Care*, Vol. 8:4, April, 1978. Page 24.

Robert Derzon, Administrator of HEW's Health Care Financing Administration, at a hearing of the Select Committee on Aging, challenged the findings of a General Accounting Office report that home care is cheaper than institutional care in five out of six cases. The study was ordered by Congressman Claude Pepper (D-FL), crusader for home health care.

Expenditures for home health services under Medicaid jumped from $30 million in FY 1974 to $126 million in FY 1976. Mr. Derzon said that expenditures "are projected to exceed $164 million in 1978." (See RADAR, *Journal for Medicaid Management*, Vol. 1, No. 3, page 90.)

Knapp, Deanne E., *et al.*, "Low Cost, Manual Drug Use Review of Medicaid Recipients to Screen Prescriber and Pharmacist Performance," *American Journal of Hospital Pharmacy*, Vol. 35:4, April, 1978. Pages 437-40.

This article describes a project to develop and test an economical drug use review (DUR) methodology to screen outpatient prescribing in large third-party programs, such as Medicaid. The pilot test used a Medicaid drug data base from a State with an urban/rural population mix and selected a sample of 100 recipients over a three-month period.

The Federally developed Medicaid Management Information System (MMIS) was used to list prescription data chronologically, by date dispensed, for the 100 recipients. Drugs for each recipient, listed by generic composition and amount, were recorded. Screening criteria were developed delineating drugs of choice, daily dose and patterns, and, as appropriate, duration of drug consumption, drug holiday (length between drug regimens), and drug/disease and drug interactions. Only 11% of the sample had prescribing patterns which passed all the screens. Any recipient profile failing to pass any screen was subjected to in depth peer review.

Analysis showed that initial start-up cost for the manual DUR was estimated $1052 (not including personnel fringe benefits); the cost of subsequent quarterly review was about $530. The author believes that manual DUR can effectively and efficiently screen prescribing in a large third-party program.

CALENDAR OF TRAINING CONFERENCES AND WORKSHOPS

INSTITUTE FOR MEDICAID MANAGEMENT

FY 1978 - 1979

SEPTEMBER	SITES	DATES	CONTACT
State Medicaid Management Review Workshop for RO/CO Staff	San Antonio, TX	9/12-14	Cole, DSM
Tailoring Health Services to Individual Needs-Conference for States	Dallas, TX	9/24-27	Hale, IMM
State Medicaid Training Staff	Richmond, VA	9/24-28	Clark, IMM
Quality Control Implementation	Denver, CO		Stockton, QC
OCTOBER			
PSRO/Long Term Care	Tentative		Palder, IMM
State Medicaid Training Staff	Estes Park, CO	10/22-26	Clark, IMM
NOVEMBER			
Managing the State Medicaid Program-State Directors Meeting	Tentative		Palder, IMM
HMOs in Medicaid	Tentative		DiNuzzo, OSO
DECEMBER			
PSRO/Long Term Care	Tentative		Palder, IMM
MMIS-Benefits to Management	Tentative		Nakamoto, DIS
JANUARY 1979			
Cost Related Reimbursement for Long Term Care	Tentative		Spiegelblatt, OPS
HMOs in Medicaid	Tentative		DiNuzzo, OSO
Conferences on Guide to Planning and Implementing EPSDT Programs (2)	Tentative		Kolb, OCH
FEBRUARY			
PSRO/Long Term Care	Tentative		Palder, IMM

Conference on Guide to Planning and Implementing EPSDT Programs (2)	Tentative		Kolb, OCH
HMOs in Medicaid	Tentative		DiNuzzo, OSO
MARCH			
State Legislators' Workshop On Medicaid Program	Tentative		Coro, IMM
HMOs in Medicaid	Tentative		DiNuzzo, OSO
Conference on Guide to Planning and Implementing EPSDT Program (2)	Tentative		Kolb, OCH
APRIL			
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